

**EVALUATION OF GROUNDWATER EXTRACTION
SYSTEM PERFORMANCE AND LANDFILL GAS
EXTRACTION SYSTEM PERFORMANCE
AT THE HELENA LANDFILL**

HELENA, MONTANA

Prepared For:

**CITY OF HELENA
HELENA, MONTANA**



Hydrometrics, Inc.
consulting scientists and engineers

FEBRUARY 2007

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March 1, 2007

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Dept. of Enviro. Quality
Waste & Underground
Tank Management Bureau

Dear Mary Louise,

Per your letter dated November 3, 2006, we have completed a report evaluating the effectiveness of the combined groundwater and methane extraction program on the overall groundwater quality beneath the old Helena Landfill, including an estimate of the overall mass of contaminants removed by the combined corrective measures. Please find enclosed for your review a copy of the report "Evaluation of Groundwater Extraction System Performance and Landfill Gas Extraction System Performance at the Helena Landfill."

If you have any questions concerning this report, please do not hesitate to call.

Sincerely,

Jodi Bingham, P.E.
Environmental Engineer/Chemist

Enclosure

c: John Rundquist, City of Helena
Ben Sautter, City of Helena (without enclosure)
Mike Wignot, Hydrometrics, Inc.

**EVALUATION OF GROUNDWATER EXTRACTION SYSTEM
PERFORMANCE AND LANDFILL GAS EXTRACTION SYSTEM
PERFORMANCE AT THE HELENA LANDFILL**

HELENA, MONTANA

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MAR 05 2007

Dept. of Enviro. Quality
Waste & Underground
Tank Management Bureau

Prepared for:

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Director of Public Works
City of Helena
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February 2007

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EVALUATION OF GROUNDWATER EXTRACTION SYSTEM PERFORMANCE AND LANDFILL GAS EXTRACTION SYSTEM PERFORMANCE AT THE HELENA LANDFILL HELENA, MONTANA

1.0 INTRODUCTION

In a letter dated November 3, 2006, Mary Hendrickson of the Montana Department of Environmental Quality (MDEQ) requested the submittal of a report evaluating the effectiveness of the combined groundwater and methane extraction program on the overall groundwater quality beneath the old City of Helena landfill, including an estimate of the overall volume of contaminants removed by the combined corrective measures. This report is in response to that request.

1.1 SITE DESCRIPTION AND BACKGROUND

A site location map is provided in Figure 1-1. The landfill is located east of Carroll College, west of Memorial Park and north of Lyndale Avenue. The landfill is surrounded for several miles in all directions by residential, commercial and industrial zoned property. There are several businesses upgradient of the landfill, which have the potential to affect groundwater quality in the area.

A site plan and June 2006 potentiometric surface is shown on Figure 1-2. The landfill encompasses about 37 acres and is divided into three sections. The southern part of the landfill (Phase I and Phase II sections) opened in the late 1800s, when open burning was the primary disposal method. Prior to 1970 no records of disposal practices are available, so actual methods of disposal are not well defined. In 1970, landfill operations began when sanitary landfill regulations were promulgated and open burning ceased. This area operated until the early 1980s and is unlined. It has since been converted into Centennial Park.



NO SCALE

**CITY OF HELENA LANDFILL
EVALUATION OF GROUNDWATER EXTRACTION
SYSTEM PERFORMANCE AND LANDFILL GAS
EXTRACTION SYSTEM PERFORMANCE**

VICINITY MAP

FIGURE

1-1



SITE CODE	DTWL	MPE	SWL
83-6	14.86	3993.20	3978.34
EPA-1	47.62	3981.08	3933.46
HL-90-1	59.75	3942.48	3882.73
HL-90-2	50.55	3950.96	3900.41
HL-90-3	62.56	3958.29	3895.73
HL-94-1R	58.95	3994.04	3935.09
HL-94-2	23.89	3966.19	3942.30
HL-94-3	35.88	3967.38	3931.50
HL-99-1	69.75	3943.15	3873.40
HL-99-2	85.00	3945.75	3860.75
HL-99-3	70.85	3948.05	3877.20
INF. GALLE	6.54	3918.89	3912.35
I-1	70.91	3899.59	3828.68
I-4	47.17	3923.70	3876.53
MPC-1	22.59	3946.08	3923.49
MPC-2	16.52	3936.09	3919.57
MPC-5	58.54	3990.14	3931.60



SCALE

0 (In Feet) 800

LEGEND

- HL-1 ■ PIEZOMETER
- 83-6 ● MONITORING WELL
- I-6 ▲ IRRIGATION WELL
- 80 □ DOMESTIC WELL
- INFILTRATION GALLERY (GROUNDWATER COLLECTION SYSTEM)
- GROUNDWATER MOUND
- AREA OF SHALLOW LOW PERMEABILITY BEDROCK
- POTENTIOMETRIC CONTOUR LINE
- INFERRED GROUNDWATER FLOW DIRECTION
- STORM WATER OUTFALL FOR LAST CHANCE GULCH

SITE PLAN AND
JUNE 2006
POTENTIOMETRIC SURFACE

FIGURE

1-2

The northern part of the landfill (Phase III) is also unlined, and was in operation until November 1993. The Phase III landfill was capped, prior to Subtitle D regulations, with an 18-inch clay cover to minimize surface water percolation through the landfill and subsequent migration of chemicals into groundwater. The landfill is defined by the Administrative Rules of Montana as a Class II landfill, which is to contain solid waste and decomposable waste, and only household quantities of hazardous waste.

The requirements for final closure were fulfilled and effective January 27, 2000.

1.2 NATURE AND EXTENT OF CONTAMINATION

Traditionally, landfills are responsible for two basic types of contamination: landfill gas and chemicals released into the soil that then leach into the groundwater. Because the Helena landfill was not lined, the potential for groundwater contamination is even greater in this instance. Regulatory monitoring of the groundwater and soil vapors around the landfill has been ongoing since the 1980's.

Extensive groundwater monitoring has been performed to determine the nature and extent of groundwater contamination associated with the landfill. Statistical evaluations have been performed for this site semiannually since 1993 and the following conclusions have been reached based on the results of those evaluations:

- Chlorinated hydrocarbons are present in groundwater downgradient of the landfill as described in the semi-annual statistical evaluations of groundwater quality data.
- Two groundwater constituents regularly exceed the Maximum Contaminant Level (MCL, federal drinking water standard) in one or more downgradient wells: nitrate + nitrite as N (nitrate) and tetrachloroethene (PCE).
- PCE is the chlorinated organic compound of greatest concern due to MCL exceedances; however, concentrations of PCE are decreasing over time in well EPA-1, the well that has historically shown the highest concentrations.
- Elevated nitrate concentrations exist both upgradient and downgradient of the landfill at similar levels.

Based on established criteria, PCE was determined to be a Contaminant of Concern for the Helena Landfill and thus required a Corrective Measures Assessment (CMA), which was completed in 1995 (Hydrometrics, 1995).

In 1994, a series of methane probes were installed around the perimeter of the landfill to more closely monitor the migration of landfill gas (primarily methane) and monthly monitoring of these probes began. In addition, the headspace in several groundwater wells is also included in this monitoring schedule. Based on the results of that monitoring, two areas of concern became apparent. Methane monitoring probes near the City of Helena Landfill/Carroll College boundary and near the YMCA and National Guard Armory indicate methane levels above the lower explosive limit (LEL). As there are buildings in these areas, the potential for methane collecting in the lower portions of the buildings exists and corrective measures were taken to limit the risks to human health.

2.0 IMPLEMENTED CORRECTIVE MEASURES

Based on the extensive groundwater sampling, it is apparent that the closed Helena landfill has impacted groundwater quality beneath and downgradient of the site. In addition, monitoring revealed the potential for landfill gas to migrate to buildings near the landfill. Beginning in 1995, a series of corrective measures assessments was completed to assess the impact on groundwater quality and determine the most effective remediation options. Implementation of corrective measures was conducted in a phased approach where one measure was implemented and its effectiveness evaluated before additional corrective measures were added.

2.1 PRELIMINARY CORRECTIVE ACTIONS

The City of Helena implemented several corrective measures following the submission of the initial hydrogeological characterization presented in 1990 (Hydrometrics, 1990). These included continuing groundwater monitoring, enforcing existing institutional controls limiting use and access of impacted groundwater, closing the landfill, installing a clay cover on newest landfilled area, and extending the Last Chance Gulch storm drain north of the landfill away from the landfill.

The original CMA (Hydrometrics, 1995) was completed by Hydrometrics in 1995 and implemented in 1995. The first alternative, evaluating the effectiveness of the existing corrective measures, was selected as the preferred alternative.

2.2 YMCA LANDFILL GAS EXTRACTION SYSTEM

The First Addendum to the CMA was submitted in 1996 (Hydrometrics, 1996) and an evaluation of the 1995 groundwater quality data was presented. This data indicated concentrations of nitrate and PCE still exceeded the MCL. Therefore, the implementation of additional corrective measures as outlined in the original CMA was considered. As methane monitoring near the YMCA and Armory also showed a potential health risk due to methane migrating into the nearby basements, alternative 2, landfill gas extraction and treatment (Section 5.2 of the CMA) was selected as the next preferred alternative to reduce risks to

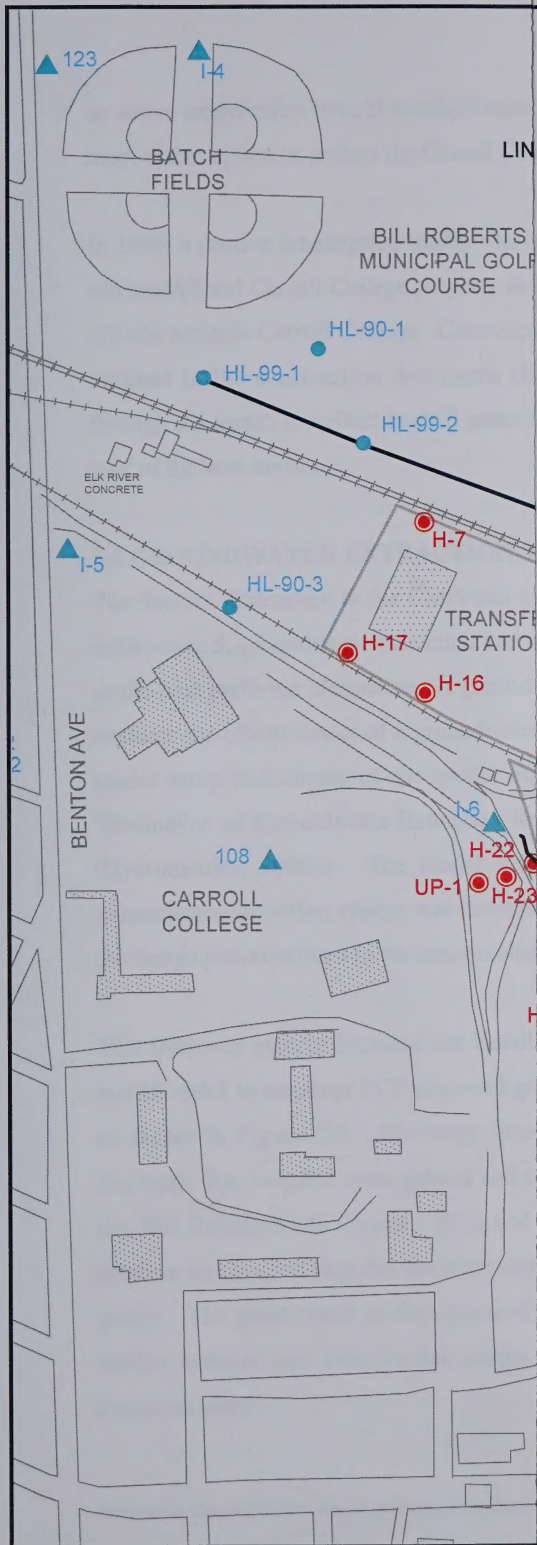
water quality as well as increase protection of buildings from migrating landfill gas. As an additional measure to help protect the public, gas alarms were installed in the basements of both buildings. On a monthly basis, the basement areas are monitored for methane and the alarms are tested to ensure they are functioning properly. In addition to the methane alarm, a positive pressure system was installed in the YMCA to prevent landfill gas from migrating into the building.

The YMCA/Armory gas extraction system was built in fall 1997 and spring 1998. The landfill gas extraction system consists of six extraction wells installed within the limits of the buried solid waste as shown in Figure 2-1. The system focuses primarily on the YMCA and Armory buildings, areas of concern with respect to public safety. In addition, the system has the potential to remove additional volatile landfill contaminants and improve groundwater quality in this area. An explosion-proof blower places a vacuum on these wells and the pressure gradient causes landfill gas to flow to the wells and be removed from the landfill area. In late 2004, EW-6 was blinded off and no more gas could be extracted from that well. In March 2005, a replacement well, EW-7, was drilled just east of EW-6 and added to the system.

After startup, gas samples were collected from the YMCA Gas Extraction System header on a monthly basis to monitor the quantity of landfill contaminants being removed. Although methane and several other VOCs were being extracted at a significant rate, the system failed to remove measurable concentrations of PCE, the main groundwater constituent of concern. Additionally, although groundwater quality improved, the December 1998 and June 1999 sampling results indicated that concentrations of PCE still exceeded the MCL in downgradient compliance wells (wells HL-90-1, HL-90-2, and MPC-1).

2.3 CARROLL COLLEGE LANDFILL GAS INTERCEPTION TRENCH

Monitoring of methane probes indicated that landfill gas was also migrating west from the landfill onto Carroll College property. An investigation of the remedial alternatives was completed in 1998 and determined that a passive methane interception trench (upgradable to



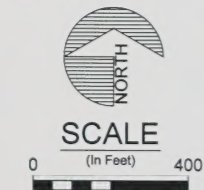
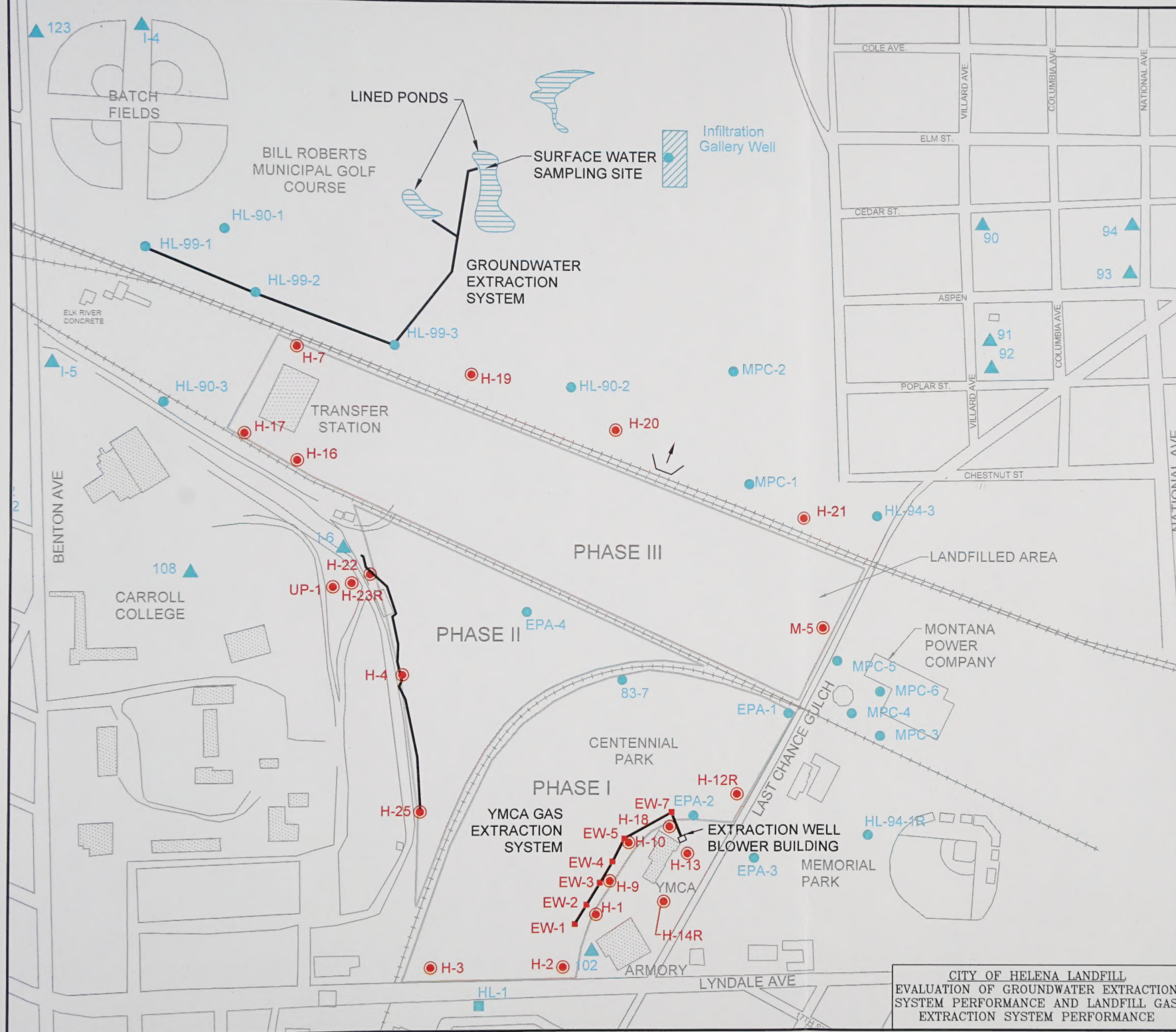
LEGEND

- 83-6 ● MONITORING WELL
- I-6 ▲ IRRIGATION WELL
- 80 □ DOMESTIC WELL
- H-20 ● METHANE PROBE
- EW-2 ■ LANDFILL GAS EXTRACTION WELL
- ▨ INFILTRATION GALLERY (GROUNDWATER COLLECTION SYSTEM)
- ↓ STORM WATER OUTFALL FOR LAST CHANCE GULCH

GROUNDWATER AND LANDFILL GAS
REMEDATION SYSTEMS

FIGURE

2-1



LEGEND

- 83-6 ● MONITORING WELL
- I-6 ▲ IRRIGATION WELL
- 80 □ DOMESTIC WELL
- H-20 ● METHANE PROBE
- EW-2 ■ LANDFILL GAS EXTRACTION WELL
- INFILTRATION GALLERY (GROUNDWATER COLLECTION SYSTEM)
- STORM WATER OUTFALL FOR LAST CHANCE GULCH

CITY OF HELENA LANDFILL
EVALUATION OF GROUNDWATER EXTRACTION
SYSTEM PERFORMANCE AND LANDFILL GAS
EXTRACTION SYSTEM PERFORMANCE

GROUNDWATER AND LANDFILL GAS
REMEDATION SYSTEMS

FIGURE

2-1

an active interception trench) installed along the western edge of the Phase II landfill was the most viable option to protect the Carroll College property.

In 1999, a passive interception trench was installed near and along the boundary between the old landfill and Carroll College property as shown in Figure 2-1 to reduce methane migrating off-site towards Carroll College. Construction was completed according to the design plans outlined in the construction documents (Hydrometrics, 1999d). A collection header runs through the trench to collect landfill gases that are released through an attic ventilator on the roof of the vent house.

2.4 GROUNDWATER EXTRACTION SYSTEM

The Second Addendum to the CMA was completed in August 1999 (Hydrometrics, 1999b). Alternative 5, groundwater extraction and treatment (Section 5.5 of the CMA), was selected as the next preferred alternative. A groundwater flow or hydrologic model was developed to evaluate the effectiveness of a groundwater extraction system. A detailed discussion of the model setup and copies of the model inputs and outputs are included in a report titled "Evaluation of Groundwater Extraction Remediation Alternative and the Helena Landfill," (Hydrometrics, 1999a). The model determined this to be a viable option and thus a groundwater extraction system was installed in December 1999 and spring 2000 according to the design plans outlined in the construction documents (Hydrometrics, 1999c).

This treatment system included the installation of three pumping wells HL-99-1, HL-99-2 and HL-99-3 to intercept PCE impacted groundwater migrating downgradient of the landfill as shown in Figure 2-1. Discharge lines from each pump are manifolded into a single discharge line installed underground and routed into existing PVC-lined irrigation ponds at the Bill Roberts Golf Course. PCE and other volatile organics are volatilized by pump aeration and by pumping the water through atomizing spray nozzles into the lined irrigation ponds. The pond water is then pumped through the golf course sprinkler system where further aeration and volatilization occurs prior to land application on the golf course as irrigation water.

3.0 EFFECTIVENESS OF REMEDIATION

3.1 YMCA LANDFILL GAS EXTRACTION SYSTEM

The YMCA landfill gas extraction system has been in continuous operation since April 1998, with the exception of infrequent downtime for maintenance and repairs. During that time, over 170 million cubic feet of landfill gas has been extracted with an average methane content of 7.3 percent. Appendix A contains the annual summary of the landfill gas extraction system emissions compiled from the monthly monitoring reports and monthly and quarterly sampling results. Appendix B shows the results of all methane monitoring conducted as part of the Sampling and Analysis Plan (Hydrometrics, 2006) as well as a summary of the average annual concentrations. Table 3-1 shows a summary of the annual reports including the average system flow rate, total volume of air removed each year, the methane content both as average percent and as total kg of methane removed (assuming standard temperature and pressure conditions).

Also shown in Table 3-1 are the average VOC concentrations and the calculated mass of VOCs removed by the system each year. A total of 280 kg of VOCs have been removed thus far by the extraction system. Dichlorodifluoromethane is the compound present at highest concentrations each year and a total of almost 200 kg of this compound have been removed by the extraction system. Tetrachloroethene, one of the contaminants of concern for this area, was not initially removed by the system, but with time, has shown measureable concentrations in the stack gas; a total of almost 17 kg of this contaminant have been removed by the extraction system. Other contaminants including 2-hexanone and methyl isobutyl ketone have only measured above the detection limit in the past two years. It should be noted that due to changing system operating conditions (flow rates in individual wells are varied based on conditions in that well and in nearby monitoring wells) make it difficult to determine whether concentrations are changing due to changes in the landfill or due to varying effects of the individual wells on the overall system stack gas characteristics.

Finally, Table 3-2 shows the average annual methane concentrations for each of the extraction wells as well as the methane monitoring probes closest to the extraction system:

City of Helena Landfill

TABLE 3-1. SUMMARY OF ANNUAL YMCA LANDFILL GAS EXTRACTION SYSTEM PERFORMANCE AND CONTAMINANT REMOVAL

	1998	1999	2000	2001	2002	2003	2004	2005	2006	Average	Total
Average Flow (cfm)	25.2	29.7	28.5	42.8	49.6	46.3	42.0	36.0	38.2	37.6	
Total Air Volume (cf)	9,979,200	15,595,251	14,979,600	22,500,962	23,947,707	22,978,604	21,479,569	18,908,735	20,054,349	18,935,997	170,423,976
Percent Methane	12.4	5.5	6.3	5.6	5.0	6.9	7.4	8.2	8.5	7.3	
Methane (kg)	22,048	17,812	18,869	24,929	22,543	31,974	33,965	31,011	33,962	26345.8	237,112
VOCs (mg/m ³)											
Dichlorodifluoromethane	7.90	4.53	4.53	4.63	2.48	4.23	4.65	3.68	2.93	4.4	
cis-1,2-Dichloroethene	ND	0.87	0.38	0.47	0.44	0.71	1.50	1.41	1.16	0.9	
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	ND	0.90	0.9	
Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	1.50	1.81	1.7	
Tetrachloroethene	ND	ND	0.12	0.79	0.37	0.15	0.51	0.74	0.37	0.4	
Vinyl chloride	ND	ND	ND	ND	ND	0.16	0.18	0.51	0.79	0.4	
VOCs (kg)											
Dichlorodifluoromethane	19.53	19.26	19.25	28.05	14.59	27.88	30.56	19.30	16.39	21.6	194.81
cis-1,2-Dichloroethene	0.00	3.70	1.54	3.10	2.54	5.02	9.55	7.35	6.69	4.4	39.49
2-Hexanone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00*	5.05	0.6	5.05
Methyl isobutyl ketone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.31	9.85	1.6	14.16
Tetrachloroethene	0.00	0.00	0.48	3.62	2.30	1.17	3.30	3.54	2.28	1.9	16.69
Vinyl chloride	0.00	0.00	0.00	0.00	0.00	1.32	1.46	2.73	4.58	1.1	10.09
Total VOCs	19.53	22.96	21.28	34.78	19.43	35.39	44.86	37.22	44.84		280.29

H-1, H-9, H-10 and H-18. Concentrations of methane in Extraction Wells 1 and 2 have decreased to near the detection limit of the instrumentation and probe H-1, nearest to these wells, has also decreased to less than the detection limit of the instrumentation. Consequently, flows in these wells have been greatly reduced, but continue to be monitored. Methane concentrations in the remaining extraction wells continues to fluctuate and varies with the season and the amount of gas being extracted. Concentrations in monitoring probes H-9 and H-10 have not shown significant decreases in methane concentrations after the first year. Monitoring probe H-18 has shown marked improvement since the system began operating; however, if Extraction Well 7 is shut down, methane concentrations in H-18 begin to increase again almost immediately.

TABLE 3-2. ANNUAL AVERAGE METHANE CONCENTRATIONS FOR YMCA LANDFILL GAS EXTRACTION SYSTEM AND NEARBY MONITORING PROBES

WELL/PROBE	1998	1999	2000	2001	2002	2003	2004	2005	2006
Extraction Well 1	2.8	0.0	0.0	0.0	0.5	0.0	0.0	0.7	0.0
Extraction Well 2	1.2	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0
Extraction Well 3	7.3	3.9	4.6	4.1	4.8	6.8	6.3	7.0	8.7
Extraction Well 4	10.6	2.3	1.6	2.5	3.5	2.9	2.7	3.4	4.7
Extraction Well 5	20.4	9.6	8.3	9.4	8.1	9.9	10.2	10.8	10.6
Extraction Well 6*	19.6	14.9	14.9	13.7	13.5	15.3	14.1		
Extraction Well 7*								11.4	11.5
Monitoring Probe H-1	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Monitoring Probe H-9	10.4	5.1	7.7	2.6	3.7	4.8	7.8	12.5	15.4
Monitoring Probe H-10	17.6	5.6	4.8	4.8	5.2	4.7	5.8	5.8	6.0
Monitoring Probe H-18	15.3	0.9	1.6	0.5	0.8	0.9	0.7	0.2	0.4

* EW-6 was replaced by EW-7 in March 2005.

Monthly monitoring of the YMCA and Armory basement areas indicate that methane is consistently below the detection limit of the instrumentation. The alarms have functioned well and have only needed minor repair and maintenance.

3.2 CARROLL COLLEGE LANDFILL GAS INTERCEPTION TRENCH

The Carroll College landfill gas interception trench has operated successfully for the past seven years. Table 3-3 shows the average annual methane concentrations in relevant wells for the past 10 years. Appendix B contains all monthly methane measurements recorded as part of the methane-monitoring schedule for the last ten years; also included is a summary table with the annual averages for each well. For comparison, Well H-4 is located just east of the trench and completed in garbage. Since its installation in 1999, no detectable concentration of methane has been measured west of the trench.

**TABLE 3-3. METHANE RESULTS IN MONITORING PROBES NEAR THE
CARROLL COLLEGE LANDFILL GAS INTERCEPTION TRENCH**

METHANE PROBE	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
H-4	25.1	22.4	19.9	9.2	10.2	8.9	10.2	10.5	10.5	9.5
H-22		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-23		5.9	0.8	0.0	0.0	Well buried during construction activities				
H-23R	Well constructed in October 2003							0.0	0.0	0.0
H-24		8.0	2.1	0.0	0.0	0.0	Well buried during construction activities			
H-25		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Since this is a passive system, measurement the volume of gas extracted or diverted has not been measured. However, quarterly sampling of the stack gas does give an indication of the quality of landfill gas removed and/or intercepted. Table 3-4 shows the detectable concentrations of VOCs in the stack gas. Appendix C includes the lab reports for all of the Carroll College landfill interception trench stack results. Similar to the YMCA gas extraction system, dichlorodifluoromethane and cis-1,2-dichloroethane are the contaminants with the highest concentration.

**TABLE 3-4. VOC CONCENTRATIONS IN CARROLL COLLEGE LANDFILL GAS
INTERCEPTION TRENCH**

Parameter	2000	2001	2002	2003	2004	2005	2006	Average
Chloroethane	0.20	ND	ND	ND	ND	ND	ND	0.03
Dichlorodifluoromethane	5.00	8.85	0.83	1.66	4.25	4.68	4.33	4.23
1,1-Dichloroethane	0.20	ND	ND	ND	0.00	0.34	0.37	0.13
Cis-1,2-Dichloroethene	4.28	3.00	0.72	ND	4.42	3.35	5.58	3.05
Methylene chloride	0.25	1.30	ND	ND	0.35	ND	0.49	0.34
Styrene	ND	ND	ND	ND	ND	ND	0.15	0.02
Tetrachloroethene	0.27	ND	ND	ND	0.60	0.31	0.68	0.26
Toluene	ND	ND	ND	ND	ND	0.14	0.17	0.04
Trichloroethene	0.15	ND	ND	ND	ND	0.30	0.28	0.10
Trichlorofluoromethane	ND	0.50	ND	ND	ND	ND	ND	0.07
Vinyl chloride	0.10	ND	ND	ND	ND	ND	0.17	0.04

3.3 GROUNDWATER EXTRACTION SYSTEM

From 2000 through 2002, flow was measured using a rotameter. In the spring of 2003, digital flow meters with flow totalizers were installed in the headers of the three extraction wells, providing more accurate measurements of flow and volume. As this system only operates during the irrigation season (roughly May through September), an hour meter was also installed to track the exact number of hours the pumps operate each year. Table 3-5 includes a summary the operating parameters for the groundwater extraction system for the last seven years. The flow rate for HL-99-1 had to be estimated (based on previous years' data) in 2006 due to a malfunction of the digital flow meter.

The system has operated almost 1100 days since June of 2000 and a total of 145 million gallons of water has been extracted and treated using this remediation system. On average, the extraction wells HL-99-1, HL-99-2 and HL-99-3 have an average flow rate of 21.2 gpm, 34.7 gpm, and 35.5 gpm, respectively. Table 3-6 shows the mass of contaminants removed conservatively assuming that all contaminants were removed to one half the detection limit. To date, the groundwater extraction system has removed more than 4.7 kilograms of VOCs.

**TABLE 3-5. SUMMARY OF GROUNDWATER EXTRACTION SYSTEM
OPERATING PARAMETERS**

Year	Days System Operated	HL-99-1		HL-99-2		HL-99-3	
		Avg. Flow (gpm)	Total Volume (gal)	Avg. Flow (gpm)	Total Volume (gal)	Avg. Flow (gpm)	Total Volume (gal)
2000	125	25	4,500,000	35	6.30E+06	35	6.30E+06
2001	178	25	6,410,000	35	8.97E+06	35	8.97E+06
2002	158	25	5,690,000	35	7.96E+06	35	7.96E+06
2003	186	19.0	3,080,000	32.1	8.58E+06	32.8	8.81E+06
2004	167	18.2	4,290,000	33.3	8.03E+06	36.5	8.78E+06
2005	119	18.1	3,080,000	34.7	8.94E+06	36.1	6.12E+06
2006	163	18.4*	4,330,000	38.0	8.94E+06	38.3	8.98E+06
Total/Avg.	1097	21.2	31,400,000	34.7	57,700,000	35.5	5.59E+07

*Estimated based on previous years' data.

3.3.1 Surface Water Monitoring

To ensure compliance with MDEQ requirements, a surface water sample from the edge of the east pond and a pan sample of the sprinkler effluent were collected monthly during system operation. The samples were analyzed using the minimum detection limit of 0.5 ppb, the maximum level allowed by MDEQ to be land applied on the golf course. Concentrations of all PCE samples in both the pond and the sprinkler system were below the laboratory reporting limit of 0.5 ppb. Appendix D includes the complete validated database of surface water samples collected at this site.

3.3.2 Groundwater Monitoring

Groundwater samples are collected from each of the extraction wells and from compliance well HL-90-1 on a quarterly basis. Additional samples downgradient of the landfill are collected on a semiannual basis. The samples are collected according to the approved sampling and analysis plan (Hydrometrics, 2006). The samples are sent to Energy Laboratories for VOC analysis and results are submitted to MDEQ. Figure 3-1 plots the VOC concentrations from those sampling events for each VOC that has had a measurable concentration in any of the three wells. Concentrations in the extraction wells show seasonal fluctuations and have only shown a decreasing trend in well HL-99-1. Tetrachloroethene is the only VOC that exceeds in Maximum Contaminant Level (MCL) of 0.005 mg/L in the

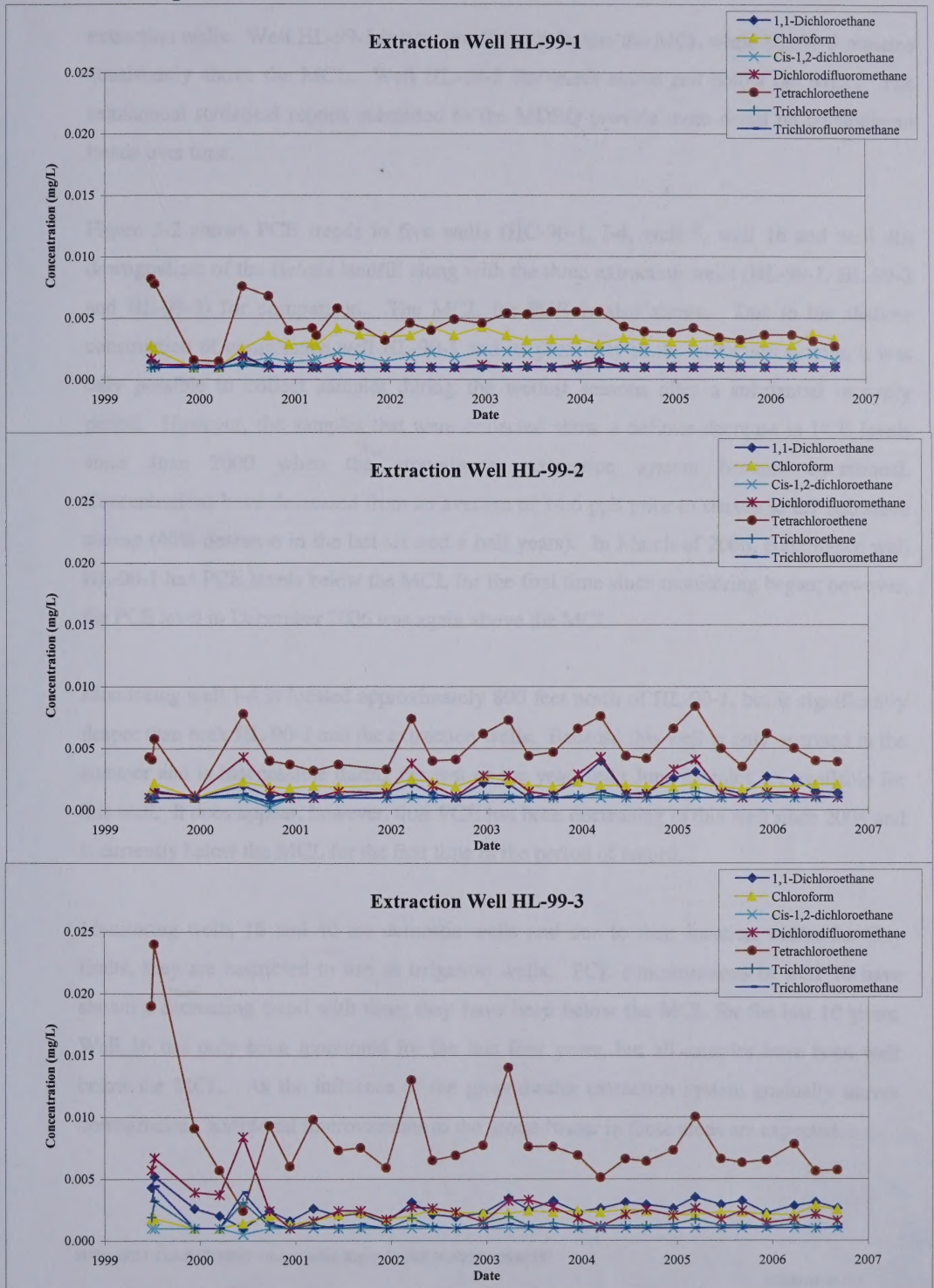
City of Helena Landfill

Table 3-6. Mass of VOCs Removed by Groundwater Extraction System (kg)

	Year	HL-99-1		HL-99-2		HL-99-3		Total Mass Removed (kg)
		Avg. Conc.* (mg/L)	Mass Removed (kg)	Avg. Conc.* (mg/L)	Mass Removed (kg)	Avg. Conc.* (mg/L)	Mass Removed (kg)	
1,1-Dichloroethane	2000	0.0009	0.006	0.0015	0.024	0.0016	0.027	0.057
	2001	0.0006	0.002	0.0012	0.017	0.0021	0.037	0.056
	2002	0.0006	0.002	0.0016	0.025	0.0023	0.044	0.071
	2003	0.0008	0.005	0.0017	0.029	0.0029	0.056	0.089
	2004	0.0008	0.004	0.0023	0.044	0.0028	0.055	0.103
	2005	<0.001	0.000	0.0022	0.041	0.0030	0.058	0.099
	2006	<0.001	0.000	0.0018	0.031	0.0028	0.054	0.085
Average/Total		0.0007	0.020	0.0018	0.210	0.0025	0.331	0.560
Chloroform	2000	0.0024	0.032	0.0020	0.036	0.0013	0.019	0.087
	2001	0.0034	0.050	0.0020	0.035	0.0019	0.034	0.119
	2002	0.0040	0.059	0.0024	0.044	0.0023	0.042	0.145
	2003	0.0034	0.049	0.0022	0.039	0.0023	0.044	0.131
	2004	0.0032	0.045	0.0020	0.035	0.0005	0.044	0.123
	2005	0.0031	0.044	0.0019	0.033	0.0022	0.041	0.118
	2006	0.0033	0.047	0.0020	0.037	0.0025	0.000	0.084
Average/Total		0.0032	0.325	0.0021	0.259	0.0019	0.222	0.807
Cis-1,2-dichloroethane	2000	0.0013	0.014	<0.001	0.000	<0.001	0.000	0.014
	2001	0.0018	0.022	<0.001	0.000	<0.001	0.000	0.022
	2002	0.0018	0.026	<0.001	0.000	<0.001	0.000	0.026
	2003	0.0023	0.030	<0.001	0.000	<0.001	0.000	0.030
	2004	0.0023	0.031	<0.001	0.000	<0.001	0.000	0.031
	2005	0.0020	0.025	<0.001	0.000	<0.001	0.000	0.025
	2006	0.0018	0.022	<0.001	0.000	<0.001	0.000	0.022
Average/Total		0.0019	0.170	<0.001	0.000	<0.001	0.000	0.170
Dichlorodifluoromethane	2000	0.0011	0.011	0.0021	0.039	0.0038	0.077	0.127
	2001	0.0007	0.003	0.0011	0.015	0.0020	0.036	0.055
	2002	0.0008	0.005	0.0024	0.046	0.0023	0.042	0.093
	2003	0.0010	0.008	0.0021	0.038	0.0028	0.054	0.099
	2004	0.0007	0.004	0.0026	0.049	0.0019	0.034	0.087
	2005	0.0006	0.002	0.0020	0.035	0.0020	0.036	0.074
	2006	0.0005	0.002	0.0010	0.012	0.0019	0.032	0.044
Average/Total		0.0008	0.032	0.0019	0.234	0.0024	0.312	0.579
Tetrachloroethene	2000	0.0050	0.076	0.0052	0.111	0.0059	0.128	0.315
	2001	0.0042	0.064	0.0034	0.069	0.0076	0.170	0.303
	2002	0.0045	0.069	0.0054	0.117	0.0085	0.191	0.377
	2003	0.0054	0.084	0.0058	0.125	0.0090	0.203	0.412
	2004	0.0044	0.066	0.0057	0.124	0.0064	0.139	0.329
	2005	0.0036	0.053	0.0058	0.126	0.0074	0.163	0.342
	2006	0.0031	0.045	0.0043	0.091	0.0063	0.139	0.274
Average/Total		0.0043	0.456	0.0051	0.763	0.0073	1.134	2.353
Trichloroethene	2000	0.0007	0.003	0.0007	0.006	0.0013	0.020	0.028
	2001	<0.001	0.000	<0.001	0.000	0.0009	0.008	0.008
	2002	<0.001	0.000	0.0009	0.008	0.0012	0.017	0.025
	2003	0.0006	0.002	0.0009	0.008	0.0014	0.021	0.032
	2004	<0.001	0.000	0.0009	0.009	0.0012	0.017	0.026
	2005	<0.001	0.000	0.0010	0.011	0.0013	0.019	0.030
	2006	<0.001	0.000	0.0007	0.004	0.0010	0.011	0.015
Average/Total		0.0005	0.005	0.0008	0.046	0.0012	0.114	0.165
Trichlorofluoromethane	2000	<0.001	0.000	0.0008	0.008	0.0016	0.026	0.034
	2001	<0.001	0.000	<0.001	0.000	0.0009	0.009	0.009
	2002	<0.001	0.000	0.0007	0.004	0.0008	0.008	0.012
	2003	<0.001	0.000	0.0006	0.003	0.0009	0.008	0.011
	2004	<0.001	0.000	0.0008	0.006	<0.001	0.000	0.006
	2005	<0.001	0.000	<0.001	0.000	<0.001	0.000	0.000
	2006	<0.001	0.000	<0.001	0.000	<0.001	0.000	0.000
Average/Total		<0.001	0.000	0.0006	0.021	0.0008	0.051	0.072
Total Mass Removed			1.009		1.534		2.164	4.706

*Average concentration was calculated using one half the detection limit for results with concentrations below the detection limit.

Figure 3-1. VOC Trends for the Groundwater Extraction Wells



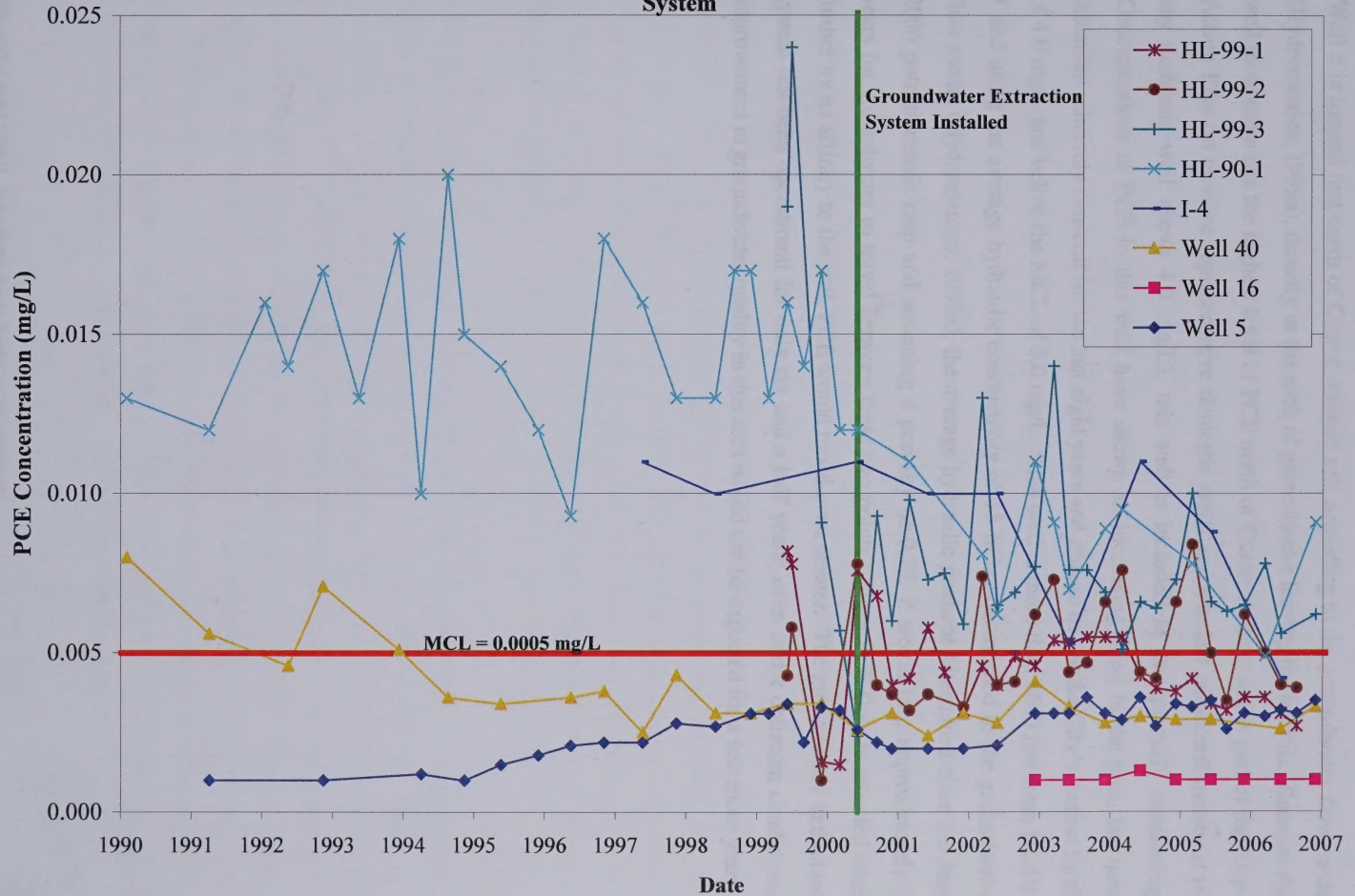
extraction wells. Well HL-99-1 is now consistently below the MCL while HL-99-3 remains consistently above the MCL. Well HL-99-2 fluctuates above and below the MCL. The semiannual statistical reports submitted to the MDEQ provide more detail on contaminant trends over time.

Figure 3-2 shows PCE trends in five wells (HL-90-1, I-4, well 5, well 16 and well 40) downgradient of the Helena landfill along with the three extraction wells (HL-99-1, HL-99-2 and HL-99-3) for comparison. The MCL for PCE is also shown. Due to the shallow construction of compliance well HL-90-1 and its proximity to the extraction system, it was only possible to collect samples during the wettest seasons after a substantial recovery period. However, the samples that were collected show a definite decrease in PCE levels since June 2000 when the groundwater extraction system became operational. Concentrations have decreased from an average of 14.6 ppb prior to startup to 8.7 ppb since startup (40% decrease in the last six and a half years). In March of 2006, compliance well HL-90-1 had PCE levels below the MCL for the first time since monitoring began; however, the PCE level in December 2006 was again above the MCL.

Monitoring well I-4 is located approximately 800 feet north of HL-90-1, but is significantly deeper than both HL-90-1 and the extraction wells. Because this well is only operated in the summer and is inaccessible during the rest of the year, only June samples are available for this well. It does appear, however, that PCE has been decreasing in this well since 2004 and is currently below the MCL for the first time in the period of record.

Monitoring wells 16 and 40 are domestic wells and due to their location within the City limits, they are restricted to use as irrigation wells. PCE concentrations in well 40 have shown a decreasing trend with time; they have been below the MCL for the last 10 years. Well 16 has only been monitored for the last four years, but all samples have been well below the MCL. As the influence of the groundwater extraction system gradually moves downgradient, additional improvements to the groundwater in these areas are expected.

Figure 3-2 Tetrachloroethene Concentrations in Wells Downgradient of the Groundwater Extraction System



Well 5 is located just north of Custer Avenue and according to the groundwater flow model (Hydrometrics, 1999a), directly in the path of groundwater leaving the landfill. Because this well most often has the highest level of PCE north of Custer Avenue and is part of the City's Action Plan (to monitor representative domestic wells and conduct additional measures for any domestic well above 4.0 mg/L), this well is included in the quarterly monitoring. Concentrations of PCE in this well have shown an increasing trend in the past, but have remained relatively constant for the last eight years and remain below the City's Action Limit of 4.0 mg/L and below the MCL of 5.0 mg/L. This well is more than 3600 feet from HL-90-1 and using the average hydraulic conductivity of 15 ft/day determined in the groundwater flow model (Hydrometrics, 1999a), the average hydraulic gradient determined from the June 2006 potentiometric map and assuming a porosity of 0.25, it would take approximately 8 years for groundwater to travel between these two points. Since PCE flow is retarded even further by its affinity to the soil, PCE would travel even slower. The groundwater extraction system has been operational for only six and a half years; even under optimum conditions, improvement in groundwater quality in this area would not be expected for a few more years.

4.0 CONCLUSIONS

The YMCA landfill gas extraction system is effectively removing methane and other landfill contaminants from beneath the ground surface. Extraction wells 1 and 2 and monitoring probes near the Armory no longer have measurable concentrations of methane present, and flows from extraction wells 1 and 2 have been reduced. A methane alarm in the Armory basement (tested and monitored for methane on a monthly basis) provides additional protection to the public. Extraction Wells 3, 4, 5 and 7 continue to extract landfill contaminants, but concentrations of methane in wells near the YMCA continue to fluctuate depending on the rate of flow in the extraction wells. Backup systems include a positive pressure system and a methane alarm in the YMCA to provide additional protection for the public. Methane in the YMCA is also monitored and the alarm tested on a monthly basis. Methane levels measured in the YMCA and Armory are consistently at background levels.

Stack results for the YMCA landfill gas extraction system indicate that in addition to methane, a significant amount of other VOCs such as dichlorodifluoromethane, cis-1,2-dichloroethene, and PCE are also being removed. However, due to the relatively small area influenced by this system, groundwater quality is unlikely to be measurably affected. This system will continue to be monitored and gas flow rates adjusted based on methane concentrations in the area.

The Carroll College landfill gas interception trench is also effectively intercepting and venting methane and other VOCs migrating west from the Helena landfill. Since its construction, concentrations of methane in monitoring wells west of the trench (towards Carroll College) have consistently remained below the detection limit of the instrumentation while a probe just east of the trench continues to show elevated levels of methane. Stack samples collected quarterly indicate that other VOCs such as dichlorodifluoromethane and cis-1,2-dichloroethene are also being intercepted. In addition, a methane alarm in the Carroll College shop, located very near the trench, provides additional safety for the public. This system will continue to be monitored to ensure optimal operating conditions.

The groundwater extraction system is effectively capturing contaminated groundwater leaving the landfill and improving downgradient water quality. Concentrations of PCE in compliance well HL-90-1 have dropped approximately 40% since the system became operational and concentrations of PCE in Extraction Well HL-99-1 have shown improvement. The extracted groundwater is successfully being treated to below detection limits before being used as irrigation water on the Bill Roberts golf course. Further downgradient of the landfill, little improvement in the groundwater quality has been seen that is attributable to the groundwater extraction system. However, based on the results of the groundwater flow model (Hydrometrics, 1999a), a substantial time delay between improved groundwater quality at the compliance well HL-90-1 and other downgradient wells is to be expected. The extraction system will continue to operate during the irrigation season and groundwater quality will continue to be monitored according to the existing monitoring schedule to evaluate additional changes in water quality.

Landfill, Haines, Alaska

Hydrometrics, 1999a. Contract Documents and Specifications for Haines Landfill Closure and Extraction System.

Hydrometrics, 1999b. Contract Documents and Specifications for Haines Landfill Closure and Extraction System.

Hydrometrics, 1999c. Remedial Sampling and Analysis Plan for the Haines Landfill Closure and Extraction System.

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- Hydrometrics, 1991. Hydrogeological Investigation of the City of Helena Landfill.
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- Hydrometrics, 2006. Revised Sampling and Analysis Plan for Groundwater, Surface Water, and Methane Monitoring at the City of Helena Landfill.

APPENDIX A ANNUAL SUMMARIES OF YMCA LANDFILL GAS EXTRACTION SYSTEM EMISSIONS

1998 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average		Average %			Total Air Volume (cf)	Days Operated =	275
	Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen			
EW-1	1.7	2.5	14.6	0.8	79.3	673,200		
EW-2	3.0	2.4	10.3	5.2	63.1	1,188,000		
EW-3	5.5	9.2	17.6	0.2	72.4	2,178,000		
EW-4	4.7	10.7	17.9	1.6	63.7	1,861,200		
EW-5	4.9	19.5	22.5	0.7	54.7	1,940,400		
EW-6	5.4	22.4	24.5	0.4	51.4	2,138,400		
TOTAL	25.2					9,979,200		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	4/22/1998	5/20/1998	6/15/1998	7/14/1998	8/26/1998	9/14/1998	10/23/1998	11/25/1998	12/10/1998	Average
VOC Sample (mg/m ³)	18.0	20.0	26.0	22.0	17.5	23.0	22.0	27.5	26.0	22.4
Methane (% vol)	14.3	13.5	13.8	13.4	12.5	12.5	11.4	11.2	9.2	12.4
VOC Sample (mg/m ³)										
Dichlorodifluoromethane				9.1	12	(2.0)J	8.5			7.9

ND = Not Detected at the reporting limit

J = Estimated Value. The analyte was present but less than the reporting limit.

Mass of Contaminants (kg) Removed Each Month

Compound	4/22/1998	5/20/1998	6/15/1998	7/14/1998	8/26/1998	9/14/1998	10/23/1998	11/25/1998	12/10/1998	Total (kg)
Methane	2323.1	2280.4	3248.6	2583.5	1973.3	2514.5	2268.9	2776.1	2079.6	22048.1
VOCs										
Dichlorodifluoromethane	1.80*	2.00*	2.60*	2.20*	2.65	0.58	2.36	2.75*	2.60*	19.53
Total VOCs	1.80	2.00	2.60	2.20	2.65	0.58	2.36	2.75	2.60	19.53

*Estimated based on average results.

1999 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	365
EW-1	0.0	0.0	8.4	4.2	71.6	0		
EW-2	0.3	0.0	1.6	16.0	22.4	178,017		
EW-3	9.9	4.1	11.6	1.2	78.7	5,178,659		
EW-4	9.3	2.3	9.2	4.6	66.7	4,868,997		
EW-5	9.7	9.8	14.4	1.0	70.8	5,091,872		
EW-6	0.5	14.9	16.0	1.0	64.3	277,706		
TOTAL	29.7					15,595,251		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/19/1999	2/17/1999	3/18/1999	4/13/1999	5/5/1999	6/25/1999	7/14/1999	8/27/1999	9/24/1999	10/14/1999	11/23/1999	12/22/1999	Average
Total Flow (cfm)	38.3	36.4	36.3	36.3	39.0	35.1	27.0	23.3	23.7	19.8	28.5	27.4	30.9
Methane (% vol)	7.1	7.6	5.0	3.9	3.1	4.1	4.9	6.9	5.6	6.2	6.3	5.4	5.5
VOC Sample (mg/m ³)													
Dichlorodifluoromethane		6.4	3.4								3.8		4.53
cis-1,2-Dichloroethene		2.6	ND								ND		0.87
Tetrachloroethene		ND	ND								ND		0.00

ND = Not Detected at the reporting limit

J = Estimated Value. The analyte was present but less than the reporting limit.

Mass of Contaminants (kg) Removed Each Month

Compound	1/19/1999	2/17/1999	3/18/1999	4/13/1999	5/5/1999	6/25/1999	7/14/1999	8/27/1999	9/24/1999	10/14/1999	11/23/1999	12/22/1999	Total (kg)
Methane	2452.2	2340.8	1653.5	1222.2	1082.2	1250.8	1196.8	1439.5	1148.3	1115.5	1577.5	1332.3	17811.7
VOCs													
Dichlorodifluoromethane	2.20*	2.66	1.56	2.01*	2.23*	1.95*	1.54*	1.33*	1.31*	1.13*	1.33	0.00*	19.26
cis-1,2-Dichloroethene	0.42*	1.08	0.00	0.38*	0.43*	0.37*	0.30*	0.25*	0.25*	0.22*	0.00	0.00*	3.70
Tetrachloroethene	0.00*	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00	0.00*	0.00
Total VOCs	2.62	3.74	1.56	2.39	2.66	2.32	1.84	1.59	1.56	1.35	1.33	0.00	22.96

*Estimated based on average results.

2000 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	365
EW-1	0.0	0.0	7.0	6.4	62.6	0		
EW-2	0.3	0.0	2.7	15.4	23.9	157,680		
EW-3	9.0	4.6	13.0	1.2	76.7	4,730,400		
EW-4	7.5	1.6	10.7	3.7	70.3	3,942,000		
EW-5	10.1	8.9	15.2	0.2	75.1	5,308,560		
EW-6	1.6	14.9	17.7	1.1	61.9	840,960		
TOTAL	28.5					14,979,600		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/19/2000	2/23/2000	3/24/2000	4/14/2000	5/25/2000	6/22/2000	7/25/2000	8/29/2000	9/22/2000	10/26/2000	11/30/2000	12/21/2000	Average
Total Flow (cfm)	30.5	28.9	29.2	26.5	28.2*	27.6	24.6	28.1	26.8	31.6	28.3	28.2*	28.2
Methane (% vol)	6.3*	6.3*	6.3*	5.1	6.3*	6.9	6.0	5.2	7.0	7.0	5.9	7.0	6.3
VOC Sample (mg/m ³)													
Dichlorodifluoromethane							3.26	3.58	4.19	7.17	4.98	4.00	4.53
cis-1,2-Dichloroethene							(1.21)J	(1.04)J	ND	ND	ND	ND	0.38
Tetrachloroethene							(0.73)J	ND	ND	ND	ND	ND	0.12

ND = Not Detected

J = Estimated Value. The analyte was present but less than the reporting limit.

Mass of Contaminants (kg) Removed Each Month

Compound	1/19/2000	2/23/2000	3/24/2000	4/14/2000	5/25/2000	6/22/2000	7/25/2000	8/25/2000	9/22/2000	10/26/2000	11/30/2000	12/21/2000	Total (kg)
Methane	1724.4	1527.5	1653.1	1181.7	1594.7	1661.6	1330.2	1320.6	1641.2	1994.7	1456.9	1782.5	18869.0
VOCs													
Dichlorodifluoromethane	1.75*	1.55*	1.67*	1.47*	1.62*	1.53*	1.01	1.27	1.38	2.86	1.72	1.43	19.25
cis-1,2-Dichloroethene	0.14*	0.13*	0.14*	0.12*	0.13*	0.13*	0.38	0.37	0.00	0.00	0.00	0.00	1.54
Tetrachloroethene	0.05*	0.04*	0.04*	0.04*	0.04*	0.04*	0.23	0.00	0.00	0.00	0.00	0.00	0.48
Total VOCs	1726.35	1529.18	1654.95	1183.30	1596.46	1663.31	1331.81	1322.27	1642.56	1997.60	1458.60	1783.89	18890.27

*Estimated based on average results.

2001 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	365
EW-1	0.0	0.0	9.6	4.2	70.2	0		
EW-2	0.0	0.0	1.8	16.9	17.7	0		
EW-3	10.4	4.1	13.2	1.1	77.6	5,458,669		
EW-4	8.6	2.5	11.0	3.2	71.3	4,505,633		
EW-5	14.0	9.4	14.9	1.2	70.0	7,343,095		
EW-6	9.9	13.7	15.3	0.9	66.6	5,193,565		
TOTAL	42.8					22,500,962		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/30/2001	2/22/2001	3/30/2001	4/20/2001	5/18/2001	6/22/2001	7/25/2001	8/24/2001	9/21/2001	10/30/2001	11/17/2001	12/31/2001	Average
Total Flow (cfm)	41.7*	41.7*	26.0	25.3	46.4	48.4	44.7	51.3	37.3	49.6	46.5	41.7*	41.7
Methane (% vol)	6.6	6.6	5.6	4.2	4.2	4.8	5.0	5.8	6.5	6.6	6.1	4.9	5.6
VOC Sample (mg/m ³)													
Dichlorodifluoromethane	4.2	4.3	7.8	4.9	3.4	4.2	3.6	4.6	4.0	5.3			4.63
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	(1.4)J	(1.5)J	(1.8)J	ND			0.47
Methylene chloride	ND	ND	ND	ND	ND	ND	(1.5)J	(2.4)J	(1.4)J	ND			0.53
Tetrachloroethene	ND	ND	(1.3)J	ND	(1.4)J	ND	(1.2)J	(2.0)J	(2.0)J	ND			0.79

ND = Not Detected

J = Estimated Value. The analyte was present but less than the reporting limit.

Mass of Contaminants (kg) Removed Each Month

Compound	1/30/2001	2/22/2001	3/30/2001	4/20/2001	5/18/2001	6/22/2001	7/25/2001	8/24/2001	9/21/2001	10/30/2001	11/17/2001	12/31/2001	Total (kg)
Methane	2484.4	2324.1	1313.8	927.7	1757.9	2029.5	2014.9	2683.8	2119.2	2951.6	2477.4	1844.5	24928.7
VOCs													
Dichlorodifluoromethane	2.21	2.05	2.56	1.52	1.99	2.49	2.03	2.98	1.83	3.32	2.63*	2.44*	28.05
cis-1,2-Dichloroethene	0.00	0.00	0.00	0.00	0.00	0.00	0.79	0.97	0.82	0.00	0.27*	0.25*	3.10
Tetrachloroethene	0.00	0.00	0.00	0.00	0.00	0.00	0.85	1.56	0.64	0.00	0.30*	0.28*	3.62
Total VOCs	2.21	2.05	2.56	1.52	1.99	2.49	3.67	5.51	3.29	3.32	3.20	2.97	34.78

*Estimated based on average results.

2002 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	335
EW-1	4.3	0.0	9.3	4.8	68.0	2,085,476		
EW-2	4.4	0.4	3.8	13.6	30.8	2,124,760		
EW-3	14.4	4.3	12.9	1.5	75.8	6,940,966		
EW-4	10.6	2.1	11.5	3.0	72.2	5,110,449		
EW-5	11.9	7.1	14.2	1.8	70.2	5,747,745		
EW-6	4.0	13.4	17.1	1.2	63.7	1,938,310		
TOTAL	49.6					23,947,707		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/8/2002	2/21/2002	4/2/2002	4/29/2002	5/28/2002	6/27/2002	7/25/2002	8/23/2002	9/30/2002	10/23/2002	11/26/2002	1/2/2003	Average
Total Flow (cfm)	44.2	31.9	44.4	50.3	45.8	63.6	60.9	38.9	51.8	35.4	46.7*	46.7*	46.7
Methane (% vol)	5.3	4.4	3.1	3.1	3.7	3.7	5.4	5.5	7.1	6.4		6.9	5.0
VOC Sample (mg/m ³)													
Dichlorodifluoromethane	3.1	3.9	3.0	(0.63)J	(0.62)J	(0.50)J	(0.45)J	2.8	2.7	2.8		4.28	2.48
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	(1.4)J	(1.4)J	(1.6)J		ND	0.44
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	(2.3)J	(1.4)J		ND	0.37

ND = Not Detected

J = Estimated Value. The analyte was present but less than the reporting limit.

Mass of Contaminants (kg) Removed Each Month

Compound	1/8/2002	2/21/2002	4/2/2002	4/29/2002	5/28/2002	6/27/2002	7/25/2002	8/23/2002	9/30/2002	10/23/2002	11/26/2002	1/2/2003	Total (kg)
Methane	2113.0	1185.9	1241.3	1361.7	1527.7	2054.5	2965.9	1928.7	3214.2	2042.1	0.0	2908.1	22543.1
VOCs													
Dichlorodifluoromethane	1.73	1.42	1.68	0.39	0.36	0.39	0.35	1.38	1.69	1.27	1.42*	2.53	14.59
cis-1,2-Dichloroethene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.89	0.72	0.25*	0.00	2.54
Tetrachloroethene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46	0.63	0.21*	0.00	2.30
Total VOCs	1.73	1.42	1.68	0.39	0.36	0.39	0.35	2.06	4.03	2.61	1.88	2.53	19.43

*Estimated based on average results.

2003 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	345
EW-1	3.1	0.0	9.6	6.1	61.6	1,563,200		
EW-2	1.8	0.0	2.7	15.5	23.5	912,611		
EW-3	14.3	6.0	14.2	1.2	74.1	7,081,979		
EW-4	9.5	2.5	12.5	2.7	72.3	4,725,073		
EW-5	13.5	9.0	16.5	0.3	73.2	6,691,460		
EW-6	4.0	15.2	19.0	0.1	65.3	2,004,280		
TOTAL	46.3					22,978,604		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/21/2003	2/27/2003	3/25/2003	4/30/2003	5/30/2003	6/30/2003	7/29/2003	8/15/2003	9/18/2003	10/28/2003	11/25/2003	12/31/2003	Average
Total Flow (cfm)	31.5	30.6	36.9	36.5	45.3	49.3	44.0	48.2	34.1	42.6*	58.3	54.3	42.6
Methane (% vol)	6.9	6.7	4.5	4.6	4.4	5.1	5.3	5.0	7.6	13.0	9.1	10.5	6.9
VOC Sample (mg/m ³)													
Dichlorodifluoromethane	3.42	3.86	3.72	(2.2)J	2.82	3.52	3.58	6.24	4.54		6.5	6.1	4.23
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	2.92		(2.5)J	(2.4)J	0.71
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	(1.6)J	0.15
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	(1.8)J	0.16

ND = Not Detected at the reporting limit

J = Estimated Value. The analyte was present but less than the reporting limit.

No sample was taken in October due to extraction system maintenance and repairs.

Mass of Contaminants (kg) Removed Each Month

Compound	1/21/2003	2/27/2003	3/25/2003	4/30/2003	5/30/2003	6/30/2003	7/29/2003	8/15/2003	9/18/2003	10/28/2003	11/25/2003	12/31/2003	Total (kg)
Methane	1961.5	1728.5	1499.6	1467.8	1798.1	2195.5	2103.5	2175.0	2264.7	5002.0	4636.7	5141.0	31973.7
VOCs													
Dichlorodifluoromethane	1.36	1.35	1.74	0.98	1.61	2.12	1.99	3.80	1.89	2.20*	4.64	4.18	27.88
cis-1,2-Dichloroethene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.37*	1.78	1.65	5.02
Tetrachloroethene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08*	0.00	1.10	1.17
Vinyl chloride	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09*	0.00	1.23	1.32
Total VOCs	1.36	1.35	1.74	0.98	1.61	2.12	1.99	3.80	3.11	2.74	6.42	8.16	35.39

*Estimated based on average results.

2004 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	355
EW-1	2.1	0.0	8.2	7.3	60.6	1,060,666		
EW-2	2.7	0.0	2.2	16.6	25.4	1,364,907		
EW-3	12.6	6.2	14.7	1.1	75.9	6,449,362		
EW-4	7.1	2.6	12.8	2.7	74.2	3,623,185		
EW-5	12.7	9.8	17.3	0.3	73.9	6,507,898		
EW-6	4.8	14.2	21.2	0.2	66.6	2,473,551		
TOTAL	42.0	6.9				21,479,569		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/22/2004	2/19/2004	3/15/2004	4/29/2004	5/14/2004	6/29/2004	7/30/2004	8/31/2004	9/31/2004	10/21/2004	11/22/2004	12/21/2004	Average
Total Flow (cfm)	52.0	61.6	55.8	46.7	44.0	58.7	40.8	39.3	35.5	32.2	37.6	32.2	44.7
Methane (% vol)	6.9	6.7	6.2	5.3	5.4	6.3	7.0	6.4	8.4	9.9	10.2	10.0	7.4
VOC Sample (mg/m ³)													
Dichlorodifluoromethane	4.7	5.0	4.0	(4.8)J	4.0	3.7	5.7	3.8		4.3	6.2	4.9	4.65
cis-1,2-Dichloroethene	(1.8)J	(1.8)J	(1.5)J	(1.2)J	(1.4)J	ND	(1.4)J	ND		(2.3)J	3.2	(1.9)J	1.50
Tetrachloroethene	ND	(1.0)J	(1.1)J	ND	ND	ND	(1.5)J	ND		(2.0)J	ND	ND	0.51
Vinyl chloride	ND	(1.1)J	(0.86)J	ND	ND	ND	ND	ND		ND	ND	ND	0.18

ND = Not Detected at the reporting limit

J = Estimated Value. The analyte was present but less than the reporting limit.

No sample was taken in September due to extraction system maintenance and repairs.

Mass of Contaminants (kg) Removed Each Month

Compound	1/22/2004	2/19/2004	3/15/2004	4/29/2004	5/14/2004	6/29/2004	7/30/2004	8/31/2004	9/31/2004	10/21/2004	11/22/2004	12/21/2004	Total (kg)
Methane	3236.7	3487.0	3125.1	2160.9	2142.3	3230.0	2576.9	2271.2	2604.5	2877.3	3349.5	2903.9	33965.3
VOCs													
Dichlorodifluoromethane	3.09	3.52	2.82	2.74	2.22	2.66	2.94	1.89	2.08*	1.75	2.85	1.99	30.56
cis-1,2-Dichloroethene	1.18	1.27	1.06	0.69	0.78	0.00	0.72	0.00	0.67*	0.94	1.47	0.77	9.55
Tetrachloroethene	0.00	0.70	0.78	0.00	0.00	0.00	0.77	0.00	0.23*	0.81	0.00	0.00	3.30
Vinyl chloride	0.00	0.77	0.61	0.00	0.00	0.00	0.00	0.00	0.08*	0.00	0.00	0.00	1.46
Total VOCs	4.27	6.26	5.27	3.43	3.00	2.66	4.43	1.89	3.07	3.50	4.32	2.77	44.86

*Estimated based on average results.

2005 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	365
EW-1	2.8	0.0	8.2	7.1	58.5	1,470,886		
EW-2	1.8	0.0	4.4	13.5	54.1	925,687		
EW-3	8.0	7.0	14.1	1.1	72.8	4,183,376		
EW-4	7.9	4.4	13.2	2.7	63.8	4,131,727		
EW-5	9.9	10.9	17.3	0.9	62.2	5,224,608		
EW-6	5.7	12.9	16.9	2.9	56.3	2,972,451		
TOTAL	36.0	7.6				18,908,735		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/28/2005	2/17/2005	3/9/2005	4/8/2005	5/10/2005	6/23/2005	7/14/2005	8/12/2005	9/20/2005	10/25/2005	11/22/2005	12/19/2005	Average
Total Flow (cfm)	24.9	29.5	43.5	16.4	18.9	51.1	42.1	50.1	38.9	43.7	41.8	28.1	35.7
Methane (% vol)	7.5	7.1	7.8	9.2	6.8	7.0	7.2	7.2	7.7	8.8	10.0	12.5	8.2
VOC Sample (mg/m ³)													
Dichlorodifluoromethane	4.6	4.3	3.1	3.7	3.3	4.2	4.0	2.7	2.7	2.8	4.8	4.0	3.68
cis-1,2-Dichloroethene	3.2	(1.8)J	(1.3)J	(1.3)J	1.1	1.2	1.1	1.2	1.6	1.4	1.7	ND	1.41
Methyl isobutyl ketone	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	1.50
Tetrachloroethene	ND	ND	ND	2.5	1.5	1.3	1.1	ND	1.0	0.68	0.84	ND	0.74
Vinyl chloride	ND	ND	ND	ND	1.2	0.87	1.2	ND	ND	ND	1.7	1.1	0.51

ND = Not Detected at the reporting limit

J = Estimated Value. The analyte was present but less than the reporting limit.

Mass of Contaminants (kg) Removed Each Month

Compound	1/28/2005	2/17/2005	3/9/2005	4/8/2005	5/10/2005	6/23/2005	7/14/2005	8/12/2005	9/20/2005	10/25/2005	11/22/2005	12/19/2005	Total (kg)
Methane	1682.3	1766.4	3059.2	1317.7	1161.7	3126.6	2733.2	3256.9	2614.5	3467.4	3654.6	3170.2	31010.8
VOCs													
Dichlorodifluoromethane	1.45	1.45	1.70	0.74	0.79	2.63	2.13	1.71	1.28	1.55	2.46	1.42	19.30
cis-1,2-Dichloroethene	1.01	0.61	0.71	0.26	0.26	0.75	0.58	0.76	0.76	0.77	0.87	0.00	7.35
Methyl isobutyl ketone	0.00	0.00	0.00	0.00	4.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.31
Tetrachloroethene	0.00	0.00	0.00	0.50	0.36	0.81	0.58	0.00	0.48	0.38	0.43	0.00	3.54
Vinyl chloride	0.00	0.00	0.00	0.00	0.29	0.54	0.64	0.00	0.00	0.00	0.87	0.39	2.73
Total VOCs	2.45	2.05	2.42	1.50	6.01	4.74	3.93	2.47	2.52	2.69	4.63	1.81	37.22

*Estimated based on average results.

2006 ANNUAL SUMMARY OF GAS EXTRACTION SYSTEM EMISSIONS

Annual Average Measurements at Extraction Wells

Well	Average Flow (cfm)	Average % CH ₄	Average % CO ₂	Average % O ₂	Average % Residual Nitrogen	Total Air Volume (cf)	Days Operated =	365
EW-1	2.3	0.0	7.2	8.0	54.7	1,201,245		
EW-2	1.6	0.0	3.7	13.2	48.0	852,071		
EW-3	8.0	8.7	15.1	1.1	67.6	4,194,500		
EW-4	8.3	4.7	12.9	3.0	68.6	4,338,638		
EW-5	8.9	10.6	16.8	0.8	65.4	4,703,695		
EW-6	9.1	11.5	17.3	2.8	55.7	4,764,199		
TOTAL	38.2	8.1				20,054,349		

YMCA Gas Extraction System Stack Gas Sample Results Summary

Measurement	1/26/2006	2/13/2006	3/23/2006	4/24/2006	5/11/2006	6/12/2006	7/27/2006	8/25/2006	9/6/2006	10/12/2006	11/30/2006	12/27/2006	Average
Total Flow (cfm)	31.0	33.0	34.6	27.6	42.6	54.4	55.1	44.7	48.3	36.0	34.2	14.0	38.0
Methane (%vol)	8.8	8.6	5.4	5.0	6.7	7.7	8.2	8.9	8.9	11.0	12.0	11.0	8.5
VOC Sample (mg/m ³)													
Dichlorodifluoromethane	3.4	3.3	2.1	2.5	2.2		2.5			4.5			2.93
cis-1,2-Dichloroethene	1.3	1.0	0.55	0.68	0.62		1.5			2.5			1.16
2-Hexanone	ND	ND	ND	ND	ND		ND			(6.3)J			0.90
Methyl isobutyl ketone	ND	ND	ND	(2.7)J	ND		ND			10			1.81
Tetrachloroethene	ND	ND	ND	(0.42)J	(0.36)J		0.86			0.97			0.37
Vinyl chloride	1.2	1.0	ND	ND	0.62		1.1			1.6			0.79

ND = Not Detected at the reporting limit

J = Estimated Value. The analyte was present but less than the reporting limit.

Switched to quarterly sampling in June after discharge permit was determined to be unnecessary.

Mass of Contaminants (kg) Removed Each Month

Compound	1/25/2006	2/13/2006	3/23/2006	4/24/2006	5/11/2006	6/12/2006	7/27/2006	8/25/2006	9/6/2006	10/12/2006	11/30/2006	12/27/2006	Total
Methane	2466.0	2394.0	1688.4	1205.3	2573.2	3660.3	4078.8	3589.1	3751.3	3578.7	3585.4	1391.4	33962.0
VOCs													
Dichlorodifluoromethane	1.33	1.24	0.92	0.84	1.18	1.95*	1.74	1.65*	1.73*	2.05	1.23*	0.52*	16.39
cis-1,2-Dichloroethene	0.51	0.38	0.24	0.23	0.33	0.78*	1.04	0.66*	0.69*	1.14	0.49*	0.21*	6.69
2-Hexanone	0.00	0.00	0.00	0.00	0.00	0.60*	0.00	0.51*	0.53*	2.87	0.38*	0.16*	5.05
Methyl isobutyl ketone	0.00	0.00	0.00	0.91	0.00	1.21*	0.00	1.02*	1.07*	4.56	0.76*	0.32*	9.85
Tetrachloroethene	0.00	0.00	0.00	0.14	0.19	0.25*	0.60	0.21*	0.22*	0.44	0.16*	0.07*	2.28
Vinyl chloride	0.47	0.38	0.00	0.00	0.33	0.53*	0.77	0.45*	0.47*	0.73	0.33*	0.14*	4.58
Total VOCs	2.32	2.00	1.16	2.13	2.04	5.31	4.15	4.50	4.70	11.79	3.33	1.41	44.84

*Estimated based on average results.

DATE	TIME	LOCATION	DEPTH	CONC.	UNIT	REMARKS
10/10/07	14:00	10-10	10	0.00	ppm	
10/10/07	14:00	10-10	20	0.00	ppm	
10/10/07	14:00	10-10	30	0.00	ppm	
10/10/07	14:00	10-10	40	0.00	ppm	
10/10/07	14:00	10-10	50	0.00	ppm	
10/10/07	14:00	10-10	60	0.00	ppm	
10/10/07	14:00	10-10	70	0.00	ppm	
10/10/07	14:00	10-10	80	0.00	ppm	
10/10/07	14:00	10-10	90	0.00	ppm	
10/10/07	14:00	10-10	100	0.00	ppm	
10/10/07	14:00	10-10	110	0.00	ppm	
10/10/07	14:00	10-10	120	0.00	ppm	
10/10/07	14:00	10-10	130	0.00	ppm	
10/10/07	14:00	10-10	140	0.00	ppm	
10/10/07	14:00	10-10	150	0.00	ppm	
10/10/07	14:00	10-10	160	0.00	ppm	
10/10/07	14:00	10-10	170	0.00	ppm	
10/10/07	14:00	10-10	180	0.00	ppm	
10/10/07	14:00	10-10	190	0.00	ppm	
10/10/07	14:00	10-10	200	0.00	ppm	
10/10/07	14:00	10-10	210	0.00	ppm	
10/10/07	14:00	10-10	220	0.00	ppm	
10/10/07	14:00	10-10	230	0.00	ppm	
10/10/07	14:00	10-10	240	0.00	ppm	
10/10/07	14:00	10-10	250	0.00	ppm	
10/10/07	14:00	10-10	260	0.00	ppm	
10/10/07	14:00	10-10	270	0.00	ppm	
10/10/07	14:00	10-10	280	0.00	ppm	
10/10/07	14:00	10-10	290	0.00	ppm	
10/10/07	14:00	10-10	300	0.00	ppm	
10/10/07	14:00	10-10	310	0.00	ppm	
10/10/07	14:00	10-10	320	0.00	ppm	
10/10/07	14:00	10-10	330	0.00	ppm	
10/10/07	14:00	10-10	340	0.00	ppm	
10/10/07	14:00	10-10	350	0.00	ppm	
10/10/07	14:00	10-10	360	0.00	ppm	
10/10/07	14:00	10-10	370	0.00	ppm	
10/10/07	14:00	10-10	380	0.00	ppm	
10/10/07	14:00	10-10	390	0.00	ppm	
10/10/07	14:00	10-10	400	0.00	ppm	
10/10/07	14:00	10-10	410	0.00	ppm	
10/10/07	14:00	10-10	420	0.00	ppm	
10/10/07	14:00	10-10	430	0.00	ppm	
10/10/07	14:00	10-10	440	0.00	ppm	
10/10/07	14:00	10-10	450	0.00	ppm	
10/10/07	14:00	10-10	460	0.00	ppm	
10/10/07	14:00	10-10	470	0.00	ppm	
10/10/07	14:00	10-10	480	0.00	ppm	
10/10/07	14:00	10-10	490	0.00	ppm	
10/10/07	14:00	10-10	500	0.00	ppm	
10/10/07	14:00	10-10	510	0.00	ppm	
10/10/07	14:00	10-10	520	0.00	ppm	
10/10/07	14:00	10-10	530	0.00	ppm	
10/10/07	14:00	10-10	540	0.00	ppm	
10/10/07	14:00	10-10	550	0.00	ppm	
10/10/07	14:00	10-10	560	0.00	ppm	
10/10/07	14:00	10-10	570	0.00	ppm	
10/10/07	14:00	10-10	580	0.00	ppm	
10/10/07	14:00	10-10	590	0.00	ppm	
10/10/07	14:00	10-10	600	0.00	ppm	
10/10/07	14:00	10-10	610	0.00	ppm	
10/10/07	14:00	10-10	620	0.00	ppm	
10/10/07	14:00	10-10	630	0.00	ppm	
10/10/07	14:00	10-10	640	0.00	ppm	
10/10/07	14:00	10-10	650	0.00	ppm	
10/10/07	14:00	10-10	660	0.00	ppm	
10/10/07	14:00	10-10	670	0.00	ppm	
10/10/07	14:00	10-10	680	0.00	ppm	
10/10/07	14:00	10-10	690	0.00	ppm	
10/10/07	14:00	10-10	700	0.00	ppm	
10/10/07	14:00	10-10	710	0.00	ppm	
10/10/07	14:00	10-10	720	0.00	ppm	
10/10/07	14:00	10-10	730	0.00	ppm	
10/10/07	14:00	10-10	740	0.00	ppm	
10/10/07	14:00	10-10	750	0.00	ppm	
10/10/07	14:00	10-10	760	0.00	ppm	
10/10/07	14:00	10-10	770	0.00	ppm	
10/10/07	14:00	10-10	780	0.00	ppm	
10/10/07	14:00	10-10	790	0.00	ppm	
10/10/07	14:00	10-10	800	0.00	ppm	
10/10/07	14:00	10-10	810	0.00	ppm	
10/10/07	14:00	10-10	820	0.00	ppm	
10/10/07	14:00	10-10	830	0.00	ppm	
10/10/07	14:00	10-10	840	0.00	ppm	
10/10/07	14:00	10-10	850	0.00	ppm	
10/10/07	14:00	10-10	860	0.00	ppm	
10/10/07	14:00	10-10	870	0.00	ppm	
10/10/07	14:00	10-10	880	0.00	ppm	
10/10/07	14:00	10-10	890	0.00	ppm	
10/10/07	14:00	10-10	900	0.00	ppm	
10/10/07	14:00	10-10	910	0.00	ppm	
10/10/07	14:00	10-10	920	0.00	ppm	
10/10/07	14:00	10-10	930	0.00	ppm	
10/10/07	14:00	10-10	940	0.00	ppm	
10/10/07	14:00	10-10	950	0.00	ppm	
10/10/07	14:00	10-10	960	0.00	ppm	
10/10/07	14:00	10-10	970	0.00	ppm	
10/10/07	14:00	10-10	980	0.00	ppm	
10/10/07	14:00	10-10	990	0.00	ppm	
10/10/07	14:00	10-10	1000	0.00	ppm	

APPENDIX B

METHANE MONITORING RESULTS

CITY OF HELENA LANDFILL
AVERAGE ANNUAL METHANE CONCENTRATIONS

PROBE/WELL	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
H-1	3.01	0.92	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
H-2	1.63	1.27	0.63	0.50	0.15	0.57	1.52	0.40	0.25	0.33
H-3	4.33	3.17	1.96	0.70	0.35	2.30	3.73	1.93	2.45	1.59
H-4	25.08	22.38	19.92	9.23	10.16	8.91	10.21	10.45	10.48	9.53
H-5	0.09	0.02	0.00	0.00	0.00	Well buried during construction activities				
H-6	0.10	0.02	0.00	0.00	0.00	Well buried during construction activities				
H-7	0.08	0.02	0.19	0.00	0.00	0.00	0.04	0.06	0.30	3.66
H-9	14.98	10.39	5.09	7.66	2.58	3.71	4.78	7.82	12.49	15.41
H-10	32.73	17.55	5.58	4.78	4.78	5.24	4.68	5.78	5.83	6.03
H-11	2.23	0.49	0.01	0.00	0.00	Well buried during construction activities				
H-12	0.09	0.00	0.00	0.00	0.00	Well buried during construction activities				
H-12R	Well constructed in October 2003							0.93	0.00	0.01
H-13	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H-14	0.06	0.00	0.00	0.00	0.00	Well buried during construction activities				
H-14R	Well constructed in October 2003							0.00	0.00	0.00
H-15	0.00	0.02	0.00	0.00	Well buried during construction activities					
H-16	0.09	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01
H-17	0.09	0.02	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
H-18	29.30	15.28	0.87	1.62	0.53	0.81	0.90	0.71	0.23	0.38
H-19 DEEP	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H-19 SHALLOW	0.10	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00
H-20	0.06	0.00	0.17	0.00	0.00	0.00	0.01	0.00	0.01	0.00
H-21	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H-22		0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01
H-23		5.93	0.75	0.00	0.00	Well buried during construction activities				
H-23R	Well constructed in October 2003							0.00	0.00	0.00
H-24		7.98	2.12	0.00	0.00	0.00	Well buried during construction activities			
H-25		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
HL-90-1	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HL-90-2	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HL-90-3	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EPA-1	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EPA-2	0.18	0.07	0.00	0.00	0.00	0.00	0.15	0.11	0.00	0.00
EPA-4	0.05	0.00	0.31	0.04	0.19	0.55	0.79	1.49	0.74	0.68
83-7	8.17	4.85	1.18	4.43	2.79	2.58	2.81	2.08	1.47	0.70
MPC-1	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
MPC-2	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M-5	Well constructed in Summer 2003 by Northwestern Energy							0.00	0.00	0.00
HL-1	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ELK RIVER	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CC SHOP		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ARMORY BASEMENT	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
YMCA BASEMENT	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UTILITY PROBE 1		0.01	0.00	NM	NM	0.00	0.00	0.00	0.00	0.00
UTILITY PROBE 2		0.00	0.00	0.00	0.00	0.00	Well buried during construction activities			
CC SANITARY SEWER	Well constructed in December 2004 by Carroll College								0.00	0.00
CC STORM SEWER	Well constructed in February 2003 by Carroll College						0.00	0.00	0.00	0.00
EXTRACTION WELL 1		2.84	0.04	0.00	0.00	0.48	0.00	0.00	0.67	0.00
EXTRACTION WELL 2		1.23	0.07	0.12	0.00	0.39	0.00	0.00	0.00	0.02
EXTRACTION WELL 3		7.33	3.94	4.56	4.05	4.80	6.79	6.25	7.00	8.69
EXTRACTION WELL 4		10.57	2.28	1.62	2.50	3.52	2.89	2.73	3.43	4.68
EXTRACTION WELL 5		20.44	9.56	8.25	9.44	8.07	9.88	10.16	10.83	10.62
EXTRACTION WELL 6		19.63	14.92	14.89	13.71	13.47	15.33	14.11	11.42	11.49
YMCA STACK GAS		12.43*	5.50*	6.26	5.58	4.96	6.89	7.39	8.23	8.52
CC STACK GAS				6.27	6.38	3.73	4.33	4.13	4.45	5.81

* estimated

HYDROMETRICS, INC.
1997 HELENA LANDFILL METHANE MONITORING RESULTS

Month Sampled	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
PROBE/WELL	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4
H-1	NM	0.7	NM	0.2	3.5	4.0	5.2	4.1	4.0	3.7	3.0	1.7
H-2	1.9	2.5	1.6	1.4	1.6	2.0	0.2	2.2	0.8	1.6	2.5	1.2
H-3	4.5	6.1	1.4	1.2	3.6	3.3	3.0	5.4	3.5	6.4	8.6	4.9
H-4	25.0	25.0	25.5	24.0	25.0	25.0	25.0	25.5	25.5	25.5	24.5	25.5
H-5	0.0	0.2	0.2	0.1	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.0
H-6	0.1	0.1	0.2	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.1	0.0
H-7	0.0	0.1	0.2	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
H-9	NM	0.2	1.1	20.5	30.5	16.0	15.0	15.0	16.5	19.0	19.5	11.5
H-10	NM	20.0	33.0	33.5	16.0	36.0	36.5	40.0	41.0	42.0	38.5	23.5
H-11	NM	0.1	0.9	0.9	3.2	2.5	2.8	3.4	3.1	2.1	3.3	2.2
H-12	NM	NM	0.2	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
H-13	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
H-14	NM	NM	0.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
H-15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0
H-16	NM	NM	0.2	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
H-17	NM	NM	0.2	0.2	0.0	0.2	0.2	0.1	0.0	0.0	0.0	0.0
H-18	37.0	11.0	27.0	27.5	28.5	32.5	34.0	36.5	39.6	42.0	36.0	0.0
H-19 DEEP	0.1	0.1	0.1	0.0	0.0	0.2	0.6	0.1	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.1	0.1	0.1	0.1	0.0	0.1	0.6	0.1	0.0	0.0	0.0	0.0
H-20	0.1	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.1	NM	NM	NM	NM	NM	NM	NM	NM	NM
Elk River	0.1	0.0	0.2	0.1	0.0	0.2	0.3	0.0	0.0	0.0	0.0	0.0
Armory Basement	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0
YMCA Basement	0.0	0.0	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.2	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.2	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0
EPA-1	0.4	0.5	0.2	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.0
EPA-2	0.1	0.0	0.2	0.2	0.0	0.2	0.2	0.1	0.0	0.0	1.1	0.0
EPA-4	0.0	0.1	0.0	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
83-7	0.1	4.7	0.2	1.7	5.7	11.0	14.0	21.0	10.0	16.5	5.6	7.5
MPC-1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARRMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Date:	1/18/97	2/14/97	3/12/97	4/10/97	5/23/97	6/25/97	7/16/97	8/20/97	9/19/97	10/15/97	11/19/97	12/17/97
Personnel:	DS	JN	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS
Instrument:	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20

HYDROMETRICS, INC.
1998 HELENA LANDFILL METHANE MONITORING RESULTS

Month Sampled	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
PROBE/WELL	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4	%CH4
H-1	0.1	0.4	1.4	2.1	4.0	1.0	0.2	1.0	0.2	0.1	0.3	0.2
H-2	2.9	1.4	2.4	1.6	1.1	0.4	0.5	0.7	1.3	1.1	0.9	0.9
H-3	10.0	3.3	4.2	1.9	2.0	0.5	0.3	0.3	4.8	3.3	0.4	7.0
H-4	24.5	22.0	24.0	22.0	21.5	22.0	23.0	23.0	23.0	22.0	21.0	21.0
H-5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
H-9	12.9	11.5	14.0	12.5	7.7	9.6	10.0	11.5	12.5	11.5	5.5	5.5
H-10	29.0	35.0	36.0	32.0	26.5	7.3	2.9	7.0	4.8	7.6	10.5	12.0
H-11	1.2	1.0	1.6	1.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-15	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	no access
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-17	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	30.0	32.5	34.0	30.5	25.0	5.6	5.1	5.0	5.1	4.2	5.6	0.8
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	no access	no access	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
H-23	5.3	3.8	5.9	5.7	4.9	7.7	9.2	9.2	4.5	0.0	9.0	6.0
H-24	10.5	11.0	13.0	10.5	7.2	12.0	10.5	5.5	3.9	1.8	9.8	0.1
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Elk River	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC Shop	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Armory Basement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA Basement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83-7	11.5	6.1	4.8	1.0	0.0	0.0	6.6	0.0	10.0	10.5		2.8
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
UTILITY PROBE 2	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 1	NA	NA	NA	12.0	7.5	0.0	0.0	0.0	0.2		0.2	no access
EXTRACTION WELL 2	NA	NA	NA	0.1	0.1	3.4	1.8	1.5	2.0	1.8	0.2	0.2
EXTRACTION WELL 3	NA	NA	NA	1.7	6.6	10.5	7.5	6.0	7.5	9.6	8.6	8.0
EXTRACTION WELL 4	NA	NA	NA	21.0	14.5	10.5	8.8	9.3	9.6	8.8	7.7	4.9
EXTRACTION WELL 5	NA	NA	NA	30.0	26.0	18.5	18.0	16.5	18.0		19.0	17.5
EXTRACTION WELL 6	NA	NA	NA	21.0	20.0	22.5	20.0	18.5	19.0		16.5	19.5
Date:	1/15/98	2/13/98	3/19/98	4/20/98	5/15/98	6/16/98	7/15/98	8/13/98	9/14/98	10/8/98	11/25/98	12/22/98
Personnel:	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS
Instrument:	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20

HYDROMETRICS, INC.
1999 HELENA LANDFILL METHANE MONITORING RESULTS

	% METHANE (CH ₄)											
PROBE/WELL	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.1	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-2	0.9	1.2	0.9	0.8	0.5	0.7	1.0	0.5	0.2	0.2	0.6	0.0
H-3	0.4	0.3	0.3	0.0	0.7	16.0	1.6	0.1	0.1	0.2	3.8	0.0
H-4	20.5	20.0	20.5	21.0	21.5	21.5	22.0	22.0	22.5	23.0	14.0	10.5
H-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-7	0.0	NM	0.0	0.0	0.0	0.0	1.2	0.9	0.0	0.0	0.0	0.0
H-9	8.0	5.6	4.4	3.6	4.0	2.1	3.9	5.9	5.3	4.9	7.4	6.0
H-10	10.5	10.5	7.4	6.4	4.0	3.4	4.2	3.7	5.4	5.6	4.3	1.6
H-11	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-15	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM	NM	NM	NM
H-16	0.0	NM	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
H-17	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.6	0.3	0.1	0.0	0.0	0.0	6.6	0.1	0.6	0.7	0.8	0.6
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
H-23	0.1	0.4	NM	0.0	0.0	3.6	4.0	0.0	0.1	0.1	0.0	0.0
H-24	4.6	4.6	NM	1.5	3.2	4.2	3.5	0.0	1.2	0.5	0.0	0.0
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	0.0	0.0	0.0	0.0	0.0	2.3	1.4	0.0	0.0	0.0	0.0	0.0
83-7	3.2	0.0	2.4	0.5	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	0.0	NM	0.0	0.0	0.0	NM	NM	NM	NM	NM	NM	NM
UTILITY PROBE 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 1	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 2	0.1	0.3	0.0	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0
EXTRACTION WELL 3	4.0	4.5	2.2	2.1	1.5	2.7	3.6	4.3	5.7	6.0	5.3	5.4
EXTRACTION WELL 4	4.2	4.5	3.2	2.5	1.8	1.5	1.6	1.7	1.8	2.0	1.2	1.4
EXTRACTION WELL 5	13.0	14.0	8.1	6.9	5.5	8.6	10.5	10.5	13.0	13.5	6.2	4.9
EXTRACTION WELL 6	16.0	14.0	14.5	12.5	12.0	14.0	14.0	15.5	16.5	17.5	17.5	15.0
Date:	1/19/99	2/17/99	3/18/99	4/13/99	5/5/99	6/17/99	7/14/99	8/27/99	9/24/99	10/14/99	11/23/99	12/22/99
Personnel:	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	z
Instrument:	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20

NM = no measurement

HYDROMETRICS, INC.
2000 HELENA LANDFILL METHANE MONITORING RESULTS

	% METHANE (CH ₄)											
PROBE/WELL	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-2	0.4	1.0	0.6	0.0	0.7	0.3	0.7	0.7	0.2	0.8	0.4	0.2
H-3	0.1	0.2	0.1	0.1	0.0	0.0	1.3	0.1	0.0	4.1	1.3	1.1
H-4	9.6	11.5	8.5	9.0	7.8	11.0	10.0	9.0	9.1	11.0	7.1	7.2
H-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-9	4.4	4.0	5.6	5.4	3.3	9.9	28.0	11.0	9.8	1.7	1.2	NM
H-10	3.6	1.8	2.8	3.9	13.0	5.0	4.9	3.9	4.6	4.8	4.3	NM
H-11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM
H-15	NM	0.0	0.0	0.0	0.0	NM	NM	NM	NM	NM	NM	NM
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-18	0.5	0.7	1.1	1.5	8.0	0.8	0.5	0.9	0.9	2.4	1.0	1.1
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM
H-23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM
H-24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	0.0	0.0	0.0	NM
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
83-7	0.0	3.6	2.5	2.5	6.7	0.0	7.2	8.0	4.5	12.0	3.3	2.8
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
UTILITY PROBE 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
EXTRACTION WELL 1	0.0	0.0	0.0	NM	NM	0.0	0.0	0.0	NM	0.0	0.0	NM
EXTRACTION WELL 2	0.0	0.0	0.0	0.0	NM	0.0	0.0	0.0	0.0	0.0	1.2	NM
EXTRACTION WELL 3	5.2	4.2	3.5	3.4	NM	4.3	3.6	4.0	5.8	5.7	5.9	NM
EXTRACTION WELL 4	1.3	1.0	1.0	1.3	NM	2.6	2.2	1.7	2.3	1.7	1.1	NM
EXTRACTION WELL 5	5.9	7.8	6.5	8.0	NM	9.8	11.5	10.0	11.5	11.5	0.0	NM
EXTRACTION WELL 6	14.0	13.0	13.0	13.5	NM	14.5	15.0	16.0	16.5	18.5	NM	NM
YMCA STACK GAS	NM	NM	NM	5.1	NM	6.9	6.0	5.2	7.0	7.0	5.9	7.0
CC STACK GAS	NM	NM	5.4	5.7	6.9	8.0	11.0	13.0	1.5	8.7	0.3	2.2
Date:	1/19/00	2/23/00	3/24/00	4/14/00	5/25/00	6/22/00	7/25/00	8/25/00	9/22/00	10/26/00	11/30/00	12/21/00
Personnel:	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS
Instrument:	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20

NM = no measurement

HYDROMETRICS, INC.
2001 HELENA LANDFILL METHANE MONITORING RESULTS

	% METHANE (CH ₄)											
PROBE/WELL	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-2	0.2	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.4	0.2	0.3	0.1
H-3	1.6	1.5	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.0
H-4	11.0	11.0	10.0	10.0	9.9	10.0	10.8	10.0	10.2	10.0	10.0	9.0
H-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-9	0.7	NM	0.7	0.8	1.4	1.0	3.3	3.7	4.6	4.4	4.9	2.9
H-10	NM	NM	4.5	4.9	3.0	6.0	5.5	4.4	4.5	5.1	5.0	4.9
H-11	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-12	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-14	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM
H-15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.5	0.0	0.0	0.0	0.4	0.2	0.0	0.0	1.3	1.2	1.7	1.0
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	NM
H-23	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	NM
H-24	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	0.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83-7	3.9	3.3	3.5	0.0	2.8	3.0	2.8	2.9	2.9	2.0	3.5	2.9
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
UTILITY PROBE 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 1	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	NM
EXTRACTION WELL 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
EXTRACTION WELL 3	4.9	4.8	3.4	2.1	2.4	3.1	3.8	3.6	5.4	5.6	5.5	NM
EXTRACTION WELL 4	2.6	2.8	2.8	2.0	2.3	2.2	2.2	2.7	2.3	2.7	2.9	NM
EXTRACTION WELL 5	12.0	5.8	11.0	8.5	7.5	8.9	8.9	11.0	10.5	9.7	10.0	NM
EXTRACTION WELL 6	15.0	NM	14.5	14.0	13.5	12.0	11.5	13.9	NM	14.4	14.6	NM
YMCA STACK GAS	6.6	6.6	5.6	4.2	4.2	4.8	5.0	5.8	6.5	6.6	6.1	4.9
CC STACK GAS	8.3	7.9	9.4	0.0	8.3	5.7	5.7	0.0	9.0	8.0	7.9	NM
Date:	2/6/01	2/22/01	3/30/01	4/20/01	5/18/01	6/22/01	7/25/01	8/24/01	9/21/01	10/30/01	11/17/01	12/31/01
Personnel:	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS	DS
Instrument:	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20	LMS-20

NM = no measurement

HYDROMETRICS, INC.
2002 HELENA LANDFILL METHANE MONITORING RESULTS

	% METHANE (CH ₄)											
PROBE/WELL	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.0	0.0	NM	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
H-2	0.5	0.4	0.0	0.1	0.1	0.2	0.0	0.4	0.0	0.6	0.6	3.9
H-3	0.0	0.0	0.0	0.0	NM	NM	NM	NM	NM	NM	11.5	NM
H-4	8.6	8.9	7.4	8.2	6.6	10.0	9.7	10.2	13.0	8.1	7.4	8.8
H-5	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-6	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-9	2.4	2.2	3.3	2.7	2.4	3.3	4.7	4.7	6.0	6.2	0.5	6.1
H-10	4.2	3.0	1.6	2.6	3.8	4.3	4.0	5.7	7.3	3.6	17.5	NM
H-11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.9	0.1	0.4	0.0	0.0	0.0	0.3	0.6	1.1	0.0	5.7	0.6
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-23	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-24	NM	0.0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.0	1.6	1.2	1.1	1.2
83-7	2.6	2.9	0.0	1.6	0.0	0.8	1.3	4.3	5.6	4.6	3.9	3.4
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	DOWN	DOWN	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	NM	OK	OK	OK
UTILITY PROBE 1	NM	NM	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UTILITY PROBE 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM	NM
EXTRACTION WELL 1	NM	NM	2.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
EXTRACTION WELL 2	0.0	0.0	2.7	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 3	4.6	3.5	2.7	2.6	2.3	0.0	1.7	4.9	6.6	6.1	15.0	7.6
EXTRACTION WELL 4	1.5	1.3	1.5	2.6	2.1	3.0	1.7	2.2	2.9	2.2	19.0	2.2
EXTRACTION WELL 5	9.2	8.3	1.6	2.9	9.1	4.2	4.6	9.1	12.0	8.6	19.0	8.2
EXTRACTION WELL 6	NM	17.5	0.2	14.5	10.5	15.0	15.5	15.5	14.5	14.5	14.5	16.0
YMCA STACK GAS	5.3	4.4	3.1	3.1	3.7	3.7	5.4	5.5	7.1	6.4	NM	6.9
CC STACK GAS	2.3	2.6	4.3	4.3	5.6	9.3	7.8	0.0	6.8	0.5	0.0	1.3
Date:	1/17/02	2/21/01	3/29/02	4/29/02	5/26/02	6/27/02	7/25/02	8/23/02	9/30/02	10/22/02	11/26/02	12/03
Personnel:	DS	DS	WC	WC	WC	WC	WC	WC	JB	JB	WC	JB
Instrument:	LMS-20	LMS-20	LMS-20	LMS-20	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx

NM = no measurement

HYDROMETRICS, INC.
2003 HELENA LANDFILL METHANE MONITORING RESULTS

PROBE/WELL	% METHANE (CH ₄)											
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-2	3.8	3.6	1.7	0.2	0.0	1.2	0.0	0.8	1.9	0.0	2.9	2.1
H-3	NM	NM	NM	NM	NM	NM	0.0	0.8	3.9	4.3	7.3	6.1
H-4	12.0	10.0	10.5	10.5	9.0	8.1	12.0	8.5	9.9	10.0	10.5	11.5
H-5	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-6	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
H-9	3.8	2.0	3.3	2.4	4.7	5.1	7.1	7.8	2.9	4.4	7.5	6.4
H-10	0.3	1.8	4.1	2.3	4.3	4.5	5.0	4.0	4.3	11.5	7.4	6.7
H-11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-12	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.2	0.0
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0
H-15	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-17	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.0	2.2	2.4
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-23	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.0	0.0	0.0
H-24	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC STORM SEWER	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.5	0.7
EPA-4	0.9	0.8	0.5	0.3	0.0	0.0	0.0	0.3	1.2	1.4	2.0	2.1
83-7	2.7	1.8	1.6	1.5	1.1	3.3	2.2	5.6	4.6	3.6	3.0	2.7
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARRMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UTILITY PROBE 2	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
EXTRACTION WELL 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
EXTRACTION WELL 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 3	7.2	7.4	4.2	4.5	4.0	5.5	5.4	5.4	7.2	11.0	8.7	11.0
EXTRACTION WELL 4	2.4	2.5	1.8	1.8	2.1	2.2	2.4	2.3	2.4	7.3	3.5	4.0
EXTRACTION WELL 5	8.7	8.9	6.2	6.7	7.1	8.8	7.7	7.4	10.5	16.0	14.0	16.5
EXTRACTION WELL 6	15.0	NM	17.5	15.5	14.5	14.0	13.5	14.6	16.5	17.0	15.5	15.0
YMCA STACK GAS	6.9	6.7	4.5	4.6	4.4	5.1	5.3	5.0	7.6	13.0	9.1	10.5
CC STACK GAS	9.0	0.0	7.3	0.8	7.7	10.5	0.0	1.9	1.2	0.0	12.0	1.6
Date:	1/20/03	2/27/03	3/24/03	4/29/03	5/30/03	6/30/03	7/29/03	8/15/03	9/17/03	10/28/03	11/25/03	12/31/03
Personnel:	WC	WC	WC	WC	WC	WC	WC	WC	WC	WC	WC	WC
Instrument:	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx

NM = no measurement

HYDROMETRICS, INC.
2004 HELENA LANDFILL METHANE MONITORING RESULTS

PROBE/WELL	% METHANE (CH ₄)											
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-2	0.2	1.2	0.0	0.1	0.1	0.2	0.0	0.4	0.0	0.6	2.0	0.0
H-3	4.0	4.9	3.7	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.9	2.8
H-4	8.4	12.5	9.7	4.0	6.3	11.5	11.5	11.0	13.5	12.5	14.0	10.5
H-7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.0
H-9	4.9	4.9	8.4	7.0	6.5	6.8	7.3	7.7	7.8	8.0	13.0	11.5
H-10	4.1	5.0	5.2	4.0	3.5	3.9	5.0	5.4	5.3	8.0	10.0	10.0
H-12R	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.6	6.6	3.9	0.0	0.0
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.4	0.5	0.0	0.0	0.0	0.0	0.1	0.6	1.4	1.8	1.9	1.8
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-23R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-25	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC STORM SEWER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	2.3	1.9	1.2	0.6	0.6	1.4	0.5	0.9	1.9	2.0	2.2	2.4
83-7	2.9	2.2	0.7	0.5	0.5	0.9	1.1	1.7	3.7	4.4	4.0	2.4
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	NM	NM	NM
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 3	7.3	6.3	5.4	4.5	5.1	5.4	5.6	6.1	6.3	7.9	8.0	7.1
EXTRACTION WELL 4	1.9	1.8	2.1	2.0	1.9	2.0	2.2	2.6	3.5	4.2	4.4	4.1
EXTRACTION WELL 5	8.9	9.2	8.0	7.3	6.3	8.3	10.0	8.9	12.0	14.0	14.5	14.5
EXTRACTION WELL 6	14.5	14.0	15.3	14.5	13.0	13.5	14.0	13.5	15.0	15.0	13.5	13.5
YMCA STACK GAS	6.9	6.7	6.2	5.3	5.4	6.3	7.0	6.4	8.4	9.9	10.2	10.0
CC STACK GAS	2.7	5.1	4.3	0.6	0.0	11.5	10.0	6.1	3.9	0.0	0.0	5.4
Date:	1/22/04	2/19/04	3/15/04	4/29/04	5/14/04	6/29/04	7/30/04	8/31/04	9/30/04	10/21/04	11/22/04	12/21/04
Personnel:	WC	WC	WC	WC	WC	WC	WC	WC	AB	WC	WC	WC
Instrument:	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx

NM = no measurement

HYDROMETRICS, INC.
2005 HELENA LANDFILL METHANE MONITORING RESULTS

PROBE/WELL	% METHANE (CH ₄)											
	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-2	0.3	1.5	0.0	0.2	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.7
H-3	3.6	2.8	0.7	2.5	0.5	2.7	2.5	0.0	4.3	2.8	2.2	4.8
H-4	12.5	11.0	10.5	10.0	13.0	9.8	11.0	10.9	12.0	12.8	9.9	2.4
H-7	0.0	0.7	0.4	1.3	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0
H-9	10.0	11.0	12.0	12.0	9.9	12.0	14.0	14.0	15.5	14.5	12.5	NM
H-10	4.6	2.6	9.0	10.0	8.5	5.0	5.8	3.8	3.5	4.4	5.4	7.3
H-12R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-16	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
H-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.2	0.0	0.1	0.0	2.1
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	0.0	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-23R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	1.8	1.3	1.3	1.8	0.0	0.0	0.0	0.0	1.6	0.0	0.5	0.6
83-7	2.4	1.3	1.4	0.9	0.6	1.0	1.3	1.9	2.2	2.3	1.7	0.6
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M-5	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	0.0	0.0	0.0	0.0
CC SANITARY SEWER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC STORM SEWER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 1	7.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
EXTRACTION WELL 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 3	8.2	8.0	7.1	7.7	5.5	5.1	5.0	6.1	8.0	9.2	9.3	4.8
EXTRACTION WELL 4	1.7	2.8	4.4	5.2	4.3	3.2	3.5	3.2	3.1	3.4	4.4	1.9
EXTRACTION WELL 5	8.6	8.1	12.0	14.0	12.0	10.0	10.5	9.1	8.6	10.5	14.0	12.5
EXTRACTION WELL 6	NM	NM	NM	7.6	6.7	12.0	12.0	12.0	13.0	13.0	13.0	13.5
YMCA STACK GAS	7.5	7.1	7.8	9.2	6.8	7.0	7.2	7.2	7.7	8.8	10.0	12.5
CC STACK GAS	0.0	5.3	9.4	12.5	0.0	3.6	2.2	NM	7.9	8.0	0.0	0.0
Date:	1/28/05	2/18/05	3/9/05	4/8/05	5/15/05	6/23/05	7/14/05	8/12/05	9/20/05	10/25/05	11/22/05	12/19/05
Personnel:	WC/RL	RL	RL	RL	WC	RL	WC	WC	RL	RL	RL	RL
Instrument:	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx

NM = no measurement

HYDROMETRICS, INC.
2006 HELENA LANDFILL METHANE MONITORING RESULTS

% METHANE (CH ₄)												
PROBE/WELL	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC
H-1	NM	0.0	NM	0.0	0.0	0.0	0.0	0.0	NM	NM	0.0	NM
H-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	3.1	0.7
H-3	1.6	0.0	0.0	1.9	1.8	3.9	0.0	0.1	0.0	0.0	7.5	2.3
H-4	10.5	11.0	5.5	7.9	7.5	11.0	10.0	12.0	8.6	13.0	4.4	13.0
H-7	0.0	3.9	0.1	0.0	3.8	3.6	4.7	5.4	3.4	5.3	6.7	7.0
H-9	14.0	12.5	11.0	12.0	13.0	12.5	17.0	19.5	19.0	20.0	19.0	15.4
H-10	4.2	5.7	4.5	3.2	4.5	4.5	4.9	6.2	5.9	8.0	9.8	11.0
H-12R	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
H-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-14R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
H-17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-18	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.4	0.0	1.7
H-19 DEEP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-19 SHALLOW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-22	NM	NM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	NM	NM
H-23R	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
H-25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
HL-90-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-90-3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPA-4	1.0	1.0	0.3	0.0	0.4	0.0	0.1	0.2	0.0	4.3	0.0	0.8
83-7	0.6	0.7	0.0	0.3	0.5	0.8	0.8	0.7	0.6	1.4	2.0	0.0
MPC-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
MPC-2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M-5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HL-1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ELK RIVER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SHOP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM
ARMORY BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA BASEMENT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
YMCA METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CC SHOP METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	NM
ARMORY METER	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
UTILITY PROBE 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC SANITARY SEWER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC STORM SEWER	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXTRACTION WELL 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	NM	0
EXTRACTION WELL 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
EXTRACTION WELL 3	9.5	9.5	5.2	5.0	6.9	6.4	6.9	8.3	8.6	12.0	13.0	13.0
EXTRACTION WELL 4	4.1	4.0	3.1	3.1	3.9	3.9	4.3	5.0	4.6	5.9	7.7	6.5
EXTRACTION WELL 5	12.0	12.0	5.7	4.8	7.4	10.0	11.5	11.0	11.0	14.5	14.5	13.0
EXTRACTION WELL 6	11.5	11.0	9.8	9.1	10.0	11.0	11.0	12.0	12.0	13.5	14.0	13.0
YMCA STACK GAS	8.8	8.6	5.4	5.0	6.7	7.7	8.2	8.9	8.9	11.0	12.0	11.0
CC STACK GAS	4.8	11.5	0.6	3.4	9.9	9.0	11.0	7.6	6.7	4.7	0.5	0.0
Date:	1/26/06	2/14/06	3/23/06	4/24/06	5/11/06	6/12/06	7/27/06	8/25/06	9/6/06	10/12/06	11/30/06	12/27/06
Personnel:	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL	RL
Instrument:	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx	LMSx

NM = no measurement

[illegible]

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics, Inc.
Project: 1273 City of Helena
Lab ID: H06070299-004
Client Sample ID: CC Stack Gas

Report Date: 08/15/06
Collection Date: 07/27/06 14:30
Date Received: 07/28/06
Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		10		SW8260B	08/07/06 17:40 / eli-b
Acrylonitrile	ND	mg/m3		10		SW8260B	08/07/06 17:40 / eli-b
Benzene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Bromochloromethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Bromodichloromethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Bromoform	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Bromomethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Carbon disulfide	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Carbon tetrachloride	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Chlorobenzene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Chlorodibromomethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Chloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Chloroform	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Chloromethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,2-Dibromo-3-chloropropane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,2-Dibromoethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Dibromomethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,2-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,4-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
trans-1,4-Dichloro-2-butene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Dichlorodifluoromethane	4.0	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,1-Dichloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,2-Dichloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,1-Dichloroethene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
cis-1,2-Dichloroethene	11	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
trans-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,2-Dichloropropane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
cis-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
trans-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Ethylbenzene	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
2-Hexanone	ND	mg/m3		10		SW8260B	08/07/06 17:40 / eli-b
Iodomethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Methyl ethyl ketone	ND	mg/m3		10		SW8260B	08/07/06 17:40 / eli-b
Methyl isobutyl ketone	ND	mg/m3		10		SW8260B	08/07/06 17:40 / eli-b
Methylene chloride	0.86	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Styrene	0.59	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,1,1,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,1,2,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Tetrachloroethene	2.1	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
Toluene	0.66	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,1,1-Trichloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b
1,1,2-Trichloroethane	ND	mg/m3		0.50		SW8260B	08/07/06 17:40 / eli-b

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: **Hydrometrics**
 Project: **None**
 Sample ID: **CARROLL COLLEGE TRENCH**
 Laboratory ID: **00-91027-2**
 Matrix: **Waste**
 Dilution Factor: **1**

Date Sampled: **12-01-00**
 Time Sampled: **14:30**
 Date/Time Received: **12-01-00 00:00**
 Date Analyzed: **12-06-00**
 Date Reported: **December 20, 2000**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	REPORT LIMIT (mg/m ³)
75-71-8	Dichlorodifluoromethane	1.34	1.00
74-87-3	Chloromethane	ND	1.00
75-01-4	Vinyl chloride (Chloroethene)	ND	1.00
74-83-9	Bromomethane	ND	1.00
75-00-3	Chloroethane	ND	1.00
75-69-4	Trichlorofluoromethane	ND	1.00
67-64-1	Acetone (2-Propanone)	ND	20.0
75-35-4	1,1 - Dichloroethene	ND	1.00
74-88-4	Iodomethane (Methyl iodide)	ND	1.00
107-13-1	Acrylonitrile (2-Propenenitrile)	ND	20.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.00
75-15-0	Carbon disulfide	ND	1.00
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.00
75-34-3	1,1 - Dichloroethane	ND	1.00
108-05-4	Vinyl acetate (Acetic acid ethenyl ester)	ND	1.00
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	ND	1.00
74-97-5	Bromochloromethane	ND	1.00
67-66-3	Chloroform (Trichloromethane)	ND	1.00
71-55-6	1,1,1 - Trichloroethane	ND	1.00
107-06-2	1,2 - Dichloroethane	ND	1.00
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.00
71-43-2	Benzene	ND	1.00
74-95-3	Dibromomethane	ND	1.00
78-87-5	1,2 - Dichloropropane	ND	1.00
79-01-6	Trichloroethene	ND	1.00
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.00
108-10-1	4 - Methyl - 2 - pentanone (MIBK)	ND	20.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.00
79-00-5	1,1,2 - Trichloroethane	ND	1.00
108-88-3	Toluene	ND	1.00
106-93-4	1,2 - Dibromoethane (EDB)	ND	1.00
591-78-6	2 - Hexanone	ND	20.0
124-48-1	Dibromochloromethane	ND	1.00
127-18-4	Tetrachloroethene	ND	1.00

ND - Analyte not detected at stated limit of detection

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: **Hydrometrics**
 Sample ID: **CARROLL COLLEGE TRENCH**
 Laboratory ID: **00-91027-2**

Date Sampled: **12-01-00**
 Date Analyzed: **12-06-00**
 Date Reported: **December 20, 2000**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	REPORT LIMIT (mg/m ³)
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.00
108-90-7	Chlorobenzene	ND	1.00
100-41-4	Ethylbenzene	ND	1.00
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.00
75-25-2	Bromoform (Tribromomethane)	ND	1.00
100-42-5	Styrene (Ethenylbenzene)	ND	1.00
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.00
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.00
96-18-4	1,2,3 - Trichloropropane	ND	1.00
110-57-6	trans - 1,4 - Dichloro - 2 - butene	ND	1.00
106-46-7	1,4 - Dichlorobenzene	ND	1.00
95-50-1	1,2 - Dichlorobenzene	ND	1.00
96-12-8	1,2 - Dibromo - 3 - chloropropane (DBCP)	ND	5.00

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS		ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	978436	1257765	77.8%	50 - 200 %
Fluorobenzene	1622762	2130630	76.2%	50 - 200 %
1,4 - Difluorobenzene	1409835	1799175	78.4%	50 - 200 %
Chlorobenzene - d5	1119348	1333065	84.0%	50 - 200 %
1,4 - Dichlorobenzene - d4	499608	634782	78.7%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	9.87	98.7%	86 - 118 %
Toluene - d8	10.2	102%	88 - 110 %
4 - Bromofluorobenzene	9.80	98.0%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.0	100%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

EPA METHOD 8260B

Client: **Hydrometrics**
Sample ID: **CARROLL COLLEGE**
Project Info: **CITY OF HELENA PROJ. NO. 1273**
Lab ID: **002-02-90076**
Matrix: **AIR**

Date Reported: **02/06/02**
Date Sampled: **01/18/02 08:30**
Date Received: **01/18/02**
Date Analyzed: **01/31/02 16:28**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m3)	QUANTITATION(mg/m3)
67-64-1	Acetone	ND	50
107-13-1	Acrylonitrile	ND,1	50
71-43-2	Benzene	ND	5.0
74-97-5	Bromochloromethane	ND	5.0
75-27-4	Bromodichloromethane	ND	5.0
75-25-2	Bromoform	ND	5.0
74-83-9	Bromomethane	ND	5.0
75-15-0	Carbon disulfide	ND,1	5.0
56-23-5	Carbon tetrachloride	ND,2	5.0
108-90-7	Chlorobenzene	ND	5.0
124-48-1	Chlorodibromomethane	ND	5.0
75-00-3	Chloroethane	ND	5.0
67-66-3	Chloroform	ND	5.0
74-87-3	Chloromethane	ND	5.0
96-12-8	1,2-Dibromo-3-chloropropane	ND,1	5.0
106-93-4	1,2-Dibromoethane	ND	5.0
74-95-3	Dibromomethane	ND	5.0
95-50-1	1,2-Dichlorobenzene	ND	5.0
106-46-7	1,4-Dichlorobenzene	ND	5.0
110-57-6	trans-1,4-Dichloro-2-butene	ND	5.0
75-71-8	Dichlorodifluoromethane	ND	5.0
75-34-3	1,1-Dichloroethane	ND	5.0
107-06-2	1,2-Dichloroethane	ND	5.0
75-35-4	1,1-Dichloroethene	ND	5.0
156-59-2	cis-1,2-Dichloroethene	ND	5.0
156-60-5	trans-1,2-Dichloroethene	ND	5.0
78-87-5	1,2-Dichloropropane	ND	5.0
10061-01-5	cis-1,3-Dichloropropene	ND	5.0
10061-02-6	trans-1,3-Dichloropropene	ND	5.0
100-41-4	Ethylbenzene	ND	5.0
591-78-6	2-Hexanone	ND	50
74-88-4	Iodomethane	ND,1	5.0
78-93-3	Methyl ethyl ketone	ND	50
108-10-1	Methyl isobutyl ketone	ND	50
75-09-2	Methylene chloride	ND	5.0
100-42-5	Styrene	ND	5.0
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0
127-18-4	Tetrachloroethene	ND	5.0
108-88-3	Toluene	ND	5.0
71-55-6	1,1,1-Trichloroethane	ND	5.0
79-00-5	1,1,2-Trichloroethane	ND	5.0
79-01-6	Trichloroethene	ND	5.0
75-69-4	Trichlorofluoromethane	ND	5.0
96-18-4	1,2,3-Trichloropropane	ND	5.0

EPA METHOD 8260B(Continued)

 Client: **Hydrometrics**
 Sample ID: **CARROLL COLLEGE**

 Date Reported: **02/06/02**
 Lab ID: **002-02-90076**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m3)	QUANTITATION(mg/m3)
108-05-4	Vinyl acetate	ND	5.0
75-01-4	Vinyl chloride	ND	5.0
108383/106423	m+p-Xylenes	ND	5.0
95-47-6	o-Xylene	ND	5.0

ND= Indicates compound was analyzed for but not detected.

1= The recovery for this compound in the continuing calibration verification was below the laboratory standard operating procedure QC advisory limit.

2= The recovery for this compound in the continuing calibration verification was above the laboratory standard operating procedure QC advisory limit.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(mg/m3)		PERCENT	ACCEPTANCE
	ADDED	MEASURED	RECOVERY	RANGE
Dibromofluoromethane	50	45.7	91	74--120
1,2-Dichloroethane d4	50	47.3	95	80--120
Toluene d8	50	44.8	90	80--120
p-Bromofluorobenzene	50	47.8	96	80--120

REPORT COMMENTS: None

 Analyst: hjc
 Reviewed: LMJ

EPA METHOD 8260B(Continued)

Client: **Hydrometrics**
Sample ID: **CARROLL COLLEGE BLOWER**

Date Reported: 01/24/01
Lab ID: 002-00-91099

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	LIMIT OF QUANTITATION(mg/m ³)
108-05-4	Vinyl acetate	ND	10
75-01-4	Vinyl chloride	ND	2.5
108383/106423	m+p-Xylenes	ND	2.5
95-47-6	o-Xylene	ND	2.5

ND= Indicates compound was analyzed for but not detected.

E= Estimated value. The recovery was below QC advisory limits in the continuing calibration verification.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(mg/m ³)		PERCENT	ACCEPTANCE
	ADDED	MEASURED	RECOVERY	RANGE
1,2-Dichloroethane d4	50	43.2	86	74--120
Toluene d8	50	46.6	93	80--120
p-Bromofluorobenzene	50	52.2	104	80--120

REPORT COMMENTS: None

Analyst: sd
Reviewed: [Signature]

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: **Hydrometrics, Proj No. 0448, City of Helena**
 Sample ID: **CARROLL COLLEGE TRENCH**
 Laboratory ID: **00-90907-2**

Date Sampled: **10-26-00**
 Date Analyzed: **10-30-00**
 Date Reported: **November 8, 2000**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	REPORT LIMIT (mg/m ³)
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.00
108-90-7	Chlorobenzene	ND	1.00
100-41-4	Ethylbenzene	ND	1.00
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.00
75-25-2	Bromoform (Tribromomethane)	ND	1.00
100-42-5	Styrene (Ethenylbenzene)	ND	1.00
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.00
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.00
96-18-4	1,2,3 - Trichloropropane	ND	1.00
110-57-6	trans - 1,4 - Dichloro - 2 - butene	ND	1.00
106-46-7	1,4 - Dichlorobenzene	ND	1.00
95-50-1	1,2 - Dichlorobenzene	ND	1.00
96-12-8	1,2 - Dibromo - 3 - chloropropane (DBCP)	ND	5.00

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE RANGE
Pentafluorobenzene	920815	963076	95.6%	50 - 200 %
Fluorobenzene	1484128	1480101	100%	50 - 200 %
1,4 - Difluorobenzene	1316225	1313581	100%	50 - 200 %
Chlorobenzene - d5	1002351	1023690	97.9%	50 - 200 %
1,4 - Dichlorobenzene - d4	482583	536915	89.9%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE RANGE
Dibromofluoromethane	11.1	111%	86 - 118 %
Toluene - d8	9.92	99.2%	88 - 110 %
4 - Bromofluorobenzene	9.82	98.2%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.3	103%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc
 Project: 1273 City of Helena
 Lab ID: H06100110-002
 Client Sample ID: CC Stack

Report Date: 10/27/06
 Collection Date: 10/11/06 11:00
 Date Received: 10/11/06
 Matrix: Air

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Trichloroethene	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
Trichlorofluoromethane	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
1,2,3-Trichloropropane	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
Vinyl acetate	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
Vinyl chloride	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
m+p-Xylenes	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
o-Xylene	ND	mg/m3		0.50		SW8260B	10/19/06 14:33 / eli-b
Surr: 1,2-Dichloroethane-d4	98.0	%REC			70-130	SW8260B	10/19/06 14:33 / eli-b
Surr: Dibromofluoromethane	113	%REC			77-126	SW8260B	10/19/06 14:33 / eli-b
Surr: p-Bromofluorobenzene	102	%REC			76-127	SW8260B	10/19/06 14:33 / eli-b
Surr: Toluene-d8	103	%REC			79-122	SW8260B	10/19/06 14:33 / eli-b

Report RL - Analyte reporting limit.
 Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc
Project: 1273 City of Helena
Lab ID: H06010172-001
Client Sample ID: CC Stack

Report Date: 02/03/06
Collection Date: 01/26/06 11:30
Date Received: 01/26/06
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		10		SW8260B	02/02/06 11:49 / hjc
Acrylonitrile	ND	mg/m3		10		SW8260B	02/02/06 11:49 / hjc
Benzene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Bromochloromethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Bromodichloromethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Bromoform	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Bromomethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Carbon disulfide	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Carbon tetrachloride	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Chlorobenzene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Chlorodibromomethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Chloroethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Chloroform	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Chloromethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,2-Dibromoethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Dibromomethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,2-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,4-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Dichlorodifluoromethane	4.8	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,1-Dichloroethane	0.84	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,2-Dichloroethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,1-Dichloroethene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
cis-1,2-Dichloroethene	6.1	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,2-Dichloropropane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Ethylbenzene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
2-Hexanone	ND	mg/m3		10		SW8260B	02/02/06 11:49 / hjc
Iodomethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Methyl ethyl ketone	ND	mg/m3		10		SW8260B	02/02/06 11:49 / hjc
Methyl isobutyl ketone	ND	mg/m3		10		SW8260B	02/02/06 11:49 / hjc
Methylene chloride	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Styrene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Tetrachloroethene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Toluene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,1,1-Trichloroethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc
Project: 1273 City of Helena
Lab ID: H06010172-001
Client Sample ID: CC Stack

Report Date: 02/03/06
Collection Date: 01/26/06 11:30
Date Received: 01/26/06
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloroethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Trichloroethene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Trichlorofluoromethane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
1,2,3-Trichloropropane	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Vinyl acetate	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Vinyl chloride	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
m+p-Xylenes	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
o-Xylene	ND	mg/m3		0.50		SW8260B	02/02/06 11:49 / hjc
Surr: 1,2-Dichloroethane-d4	81.2	%REC			70-130	SW8260B	02/02/06 11:49 / hjc
Surr: Dibromofluoromethane	95.2	%REC			77-126	SW8260B	02/02/06 11:49 / hjc
Surr: p-Bromofluorobenzene	119	%REC			76-127	SW8260B	02/02/06 11:49 / hjc
Surr: Toluene-d8	97.2	%REC			79-122	SW8260B	02/02/06 11:49 / hjc

Report	RL - Analyte reporting limit.
Definitions:	QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc
Project: 1273 City of Helena
Lab ID: H06040181-002
Client Sample ID: CC Stack Gas

Report Date: 05/09/06
Collection Date: 04/24/06 13:30
Date Received: 04/24/06
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		10		SW8260B	05/05/06 15:11 / eli-b
Acrylonitrile	ND	mg/m3		10		SW8260B	05/05/06 15:11 / eli-b
Benzene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Bromochloromethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Bromodichloromethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Bromoform	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Bromomethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Carbon disulfide	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Carbon tetrachloride	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Chlorobenzene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Chlorodibromomethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Chloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Chloroform	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Chloromethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,2-Dibromo-3-chloropropane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,2-Dibromoethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Dibromomethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,2-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,4-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
trans-1,4-Dichloro-2-butene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Dichlorodifluoromethane	3.9	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,1-Dichloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,2-Dichloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,1-Dichloroethene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
cis-1,2-Dichloroethene	1.8	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
trans-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,2-Dichloropropane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
cis-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
trans-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Ethylbenzene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
2-Hexanone	ND	mg/m3		10		SW8260B	05/05/06 15:11 / eli-b
Iodomethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Methyl ethyl ketone	ND	mg/m3		10		SW8260B	05/05/06 15:11 / eli-b
Methyl isobutyl ketone	ND	mg/m3		10		SW8260B	05/05/06 15:11 / eli-b
Methylene chloride	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Styrene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,1,1,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,1,2,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Tetrachloroethene	0.60	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Toluene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,1,1-Trichloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc
Project: 1273 City of Helena
Lab ID: H06040181-002
Client Sample ID: CC Stack Gas

Report Date: 05/09/06
Collection Date: 04/24/06 13:30
Date Received: 04/24/06
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloroethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Trichloroethene	0.47	mg/m3	J	0.50		SW8260B	05/05/06 15:11 / eli-b
Trichlorofluoromethane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
1,2,3-Trichloropropane	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Vinyl acetate	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Vinyl chloride	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
m+p-Xylenes	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
o-Xylene	ND	mg/m3		0.50		SW8260B	05/05/06 15:11 / eli-b
Surr: 1,2-Dichloroethane-d4	85.0	%REC			70-130	SW8260B	05/05/06 15:11 / eli-b
Surr: Dibromofluoromethane	94.0	%REC			77-126	SW8260B	05/05/06 15:11 / eli-b
Surr: p-Bromofluorobenzene	91.0	%REC			76-127	SW8260B	05/05/06 15:11 / eli-b
Surr: Toluene-d8	96.0	%REC			79-122	SW8260B	05/05/06 15:11 / eli-b

Report RL - Analyte reporting limit.

Definitions: QCL = Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena
Lab ID: H05100204-001
Client Sample ID: CC Stack Gas

Report Date: 11/16/05
Collection Date: 10/25/05 14:00
Date Received: 10/25/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		10		SW8260B	11/08/05 15:46 / hjc
Acrylonitrile	ND	mg/m3		10		SW8260B	11/08/05 15:46 / hjc
Benzene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Bromochloromethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Bromodichloromethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Bromoform	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Bromomethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Carbon disulfide	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Carbon tetrachloride	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Chlorobenzene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Chlorodibromomethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Chloroethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Chloroform	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Chloromethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,2-Dibromoethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Dibromomethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,2-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,4-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Dichlorodifluoromethane	6.0	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,1-Dichloroethane	0.74	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,2-Dichloroethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,1-Dichloroethene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
cis-1,2-Dichloroethene	5.1	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,2-Dichloropropane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Ethylbenzene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
2-Hexanone	ND	mg/m3		10		SW8260B	11/08/05 15:46 / hjc
Iodomethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Methyl ethyl ketone	ND	mg/m3		10		SW8260B	11/08/05 15:46 / hjc
Methyl isobutyl ketone	ND	mg/m3		10		SW8260B	11/08/05 15:46 / hjc
Methylene chloride	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Styrene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Tetrachloroethene	0.69	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Toluene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,1,1-Trichloroethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena
Lab ID: H05100204-001
Client Sample ID: CC Stack Gas

Report Date: 11/16/05
Collection Date: 10/25/05 14:00
Date Received: 10/25/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloroethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Trichloroethene	0.56	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Trichlorofluoromethane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
1,2,3-Trichloropropane	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Vinyl acetate	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Vinyl chloride	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
m+p-Xylenes	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
o-Xylene	ND	mg/m3		0.50		SW8260B	11/08/05 15:46 / hjc
Surr: 1,2-Dichloroethane-d4	98.4	%REC			70-130	SW8260B	11/08/05 15:46 / hjc
Surr: Dibromofluoromethane	105	%REC			77-126	SW8260B	11/08/05 15:46 / hjc
Surr: p-Bromofluorobenzene	102	%REC			76-127	SW8260B	11/08/05 15:46 / hjc
Surr: Toluene-d8	98.8	%REC			79-122	SW8260B	11/08/05 15:46 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena Landfill
Lab ID: H05070123-002
Client Sample ID: CC Stack Gas

Report Date: 08/04/05
Collection Date: 07/14/05 11:00
Date Received: 07/14/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		10		SW8260B	07/15/05 15:48 / hjc
Acrylonitrile	ND	mg/m3		10		SW8260B	07/15/05 15:48 / hjc
Benzene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Bromochloromethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Bromodichloromethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Bromoform	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Bromomethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Carbon disulfide	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Carbon tetrachloride	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Chlorobenzene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Chlorodibromomethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Chloroethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Chloroform	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Chloromethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,2-Dibromoethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Dibromomethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,2-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,4-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Dichlorodifluoromethane	4.0	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,1-Dichloroethane	0.61	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,2-Dichloroethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,1-Dichloroethene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
cis-1,2-Dichloroethene	2.7	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,2-Dichloropropane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Ethylbenzene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
2-Hexanone	ND	mg/m3		10		SW8260B	07/15/05 15:48 / hjc
Iodomethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Methyl ethyl ketone	ND	mg/m3		10		SW8260B	07/15/05 15:48 / hjc
Methyl isobutyl ketone	ND	mg/m3		10		SW8260B	07/15/05 15:48 / hjc
Methylene chloride	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Styrene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Tetrachloroethene	0.56	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Toluene	0.54	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,1,1-Trichloroethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena Landfill
Lab ID: H05070123-002
Client Sample ID: CC Stack Gas

Report Date: 08/04/05
Collection Date: 07/14/05 11:00
Date Received: 07/14/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloroethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Trichloroethene	0.65	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Trichlorofluoromethane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
1,2,3-Trichloropropane	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Vinyl acetate	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Vinyl chloride	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
m+p-Xylenes	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
o-Xylene	ND	mg/m3		0.50		SW8260B	07/15/05 15:48 / hjc
Surr: 1,2-Dichloroethane-d4	92.0	%REC			70-130	SW8260B	07/15/05 15:48 / hjc
Surr: Dibromofluoromethane	90.0	%REC			77-126	SW8260B	07/15/05 15:48 / hjc
Surr: p-Bromofluorobenzene	102	%REC			76-127	SW8260B	07/15/05 15:48 / hjc
Surr: Toluene-d8	106	%REC			79-122	SW8260B	07/15/05 15:48 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena
Lab ID: H05040087-002
Client Sample ID: Carroll College Stack Gas

Report Date: 04/21/05
Collection Date: 04/08/05 10:58
Date Received: 04/08/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50		SW8260B	04/19/05 13:17 / hjc
Acrylonitrile	ND	mg/m3		50		SW8260B	04/19/05 13:17 / hjc
Benzene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Bromochloromethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Bromodichloromethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Bromoform	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Bromomethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Carbon disulfide	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Carbon tetrachloride	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Chlorobenzene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Chlorodibromomethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Chloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Chloroform	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Chloromethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,2-Dibromoethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Dibromomethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Dichlorodifluoromethane	8.7	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,1-Dichloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,2-Dichloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,1-Dichloroethene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
cis-1,2-Dichloroethene	5.6	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,2-Dichloropropane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Ethylbenzene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
2-Hexanone	ND	mg/m3		50		SW8260B	04/19/05 13:17 / hjc
Iodomethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Methyl ethyl ketone	ND	mg/m3		50		SW8260B	04/19/05 13:17 / hjc
Methyl isobutyl ketone	ND	mg/m3		50		SW8260B	04/19/05 13:17 / hjc
Methylene chloride	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Styrene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Tetrachloroethene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Toluene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena
Lab ID: H05040087-002
Client Sample ID: Carroll College Stack Gas

Report Date: 04/21/05
Collection Date: 04/08/05 10:58
Date Received: 04/08/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Trichloroethene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Vinyl acetate	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Vinyl chloride	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
o-Xylene	ND	mg/m3		2.5		SW8260B	04/19/05 13:17 / hjc
Surr: 1,2-Dichloroethane-d4	87.6	%REC			70-130	SW8260B	04/19/05 13:17 / hjc
Surr: Dibromofluoromethane	99.6	%REC			77-126	SW8260B	04/19/05 13:17 / hjc
Surr: p-Bromofluorobenzene	97.2	%REC			76-127	SW8260B	04/19/05 13:17 / hjc
Surr: Toluene-d8	106	%REC			79-122	SW8260B	04/19/05 13:17 / hjc

Report	RL - Analyte reporting limit.	MCL - Maximum contaminant level.
Definitions:	QCL - Quality control limit.	ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H05010173-001
Client Sample ID: Carroll College Stack

Report Date: 02/03/05
Collection Date: 01/28/05 10:50
Date Received: 01/28/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50		SW8260B	02/02/05 14:39 / hjc
Acrylonitrile	ND	mg/m3		50		SW8260B	02/02/05 14:39 / hjc
Benzene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Bromochloromethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Bromodichloromethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Bromoform	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Bromomethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Carbon disulfide	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Carbon tetrachloride	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Chlorobenzene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Chlorodibromomethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Chloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Chloroform	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Chloromethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,2-Dibromoethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Dibromomethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Dichlorodifluoromethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,1-Dichloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,2-Dichloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,1-Dichloroethene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,2-Dichloropropane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Ethylbenzene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
2-Hexanone	ND	mg/m3		50		SW8260B	02/02/05 14:39 / hjc
Iodomethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Methyl ethyl ketone	ND	mg/m3		50		SW8260B	02/02/05 14:39 / hjc
Methyl isobutyl ketone	ND	mg/m3		50		SW8260B	02/02/05 14:39 / hjc
Methylene chloride	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Styrene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Tetrachloroethene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Toluene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H05010173-001
Client Sample ID: Carroll College Stack

Report Date: 02/03/05
Collection Date: 01/28/05 10:50
Date Received: 01/28/05
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Trichloroethene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Vinyl acetate	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Vinyl chloride	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
o-Xylene	ND	mg/m3		2.5		SW8260B	02/02/05 14:39 / hjc
Surr: 1,2-Dichloroethane-d4	100	%REC			70-130	SW8260B	02/02/05 14:39 / hjc
Surr: Dibromofluoromethane	96.8	%REC			77-126	SW8260B	02/02/05 14:39 / hjc
Surr: p-Bromofluorobenzene	99.6	%REC			76-127	SW8260B	02/02/05 14:39 / hjc
Surr: Toluene-d8	102	%REC			79-122	SW8260B	02/02/05 14:39 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Trench
Lab ID: H04100163-001
Client Sample ID: Carroll College Trench/Stack

Report Date: 11/09/04
Collection Date: 10/21/04 16:45
Date Received: 10/22/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50		SW8260B	11/04/04 12:53 / hjc
Acrylonitrile	ND	mg/m3		50		SW8260B	11/04/04 12:53 / hjc
Benzene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Bromochloromethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Bromodichloromethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Bromoform	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Bromomethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Carbon disulfide	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Carbon tetrachloride	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Chlorobenzene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Chlorodibromomethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Chloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Chloroform	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Chloromethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,2-Dibromoethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Dibromomethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Dichlorodifluoromethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,1-Dichloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,2-Dichloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,1-Dichloroethene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,2-Dichloropropane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Ethylbenzene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
2-Hexanone	ND	mg/m3		50		SW8260B	11/04/04 12:53 / hjc
Iodomethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Methyl ethyl ketone	ND	mg/m3		50		SW8260B	11/04/04 12:53 / hjc
Methyl isobutyl ketone	ND	mg/m3		50		SW8260B	11/04/04 12:53 / hjc
Methylene chloride	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Styrene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Tetrachloroethene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Trench
Lab ID: H04100163-001
Client Sample ID: Carroll College Trench/Stack

Report Date: 11/09/04
Collection Date: 10/21/04 16:45
Date Received: 10/22/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Toluene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Trichloroethene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Vinyl acetate	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Vinyl chloride	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
o-Xylene	ND	mg/m3		2.5		SW8260B	11/04/04 12:53 / hjc
Surr: 1,2-Dichloroethane-d4	98.4	%REC			70-130	SW8260B	11/04/04 12:53 / hjc
Surr: Dibromofluoromethane	99.2	%REC			77-126	SW8260B	11/04/04 12:53 / hjc
Surr: p-Bromofluorobenzene	103	%REC			76-127	SW8260B	11/04/04 12:53 / hjc
Surr: Toluene-d8	104	%REC			79-122	SW8260B	11/04/04 12:53 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H04080007-001
Client Sample ID: Carroll College Stack

Report Date: 08/11/04
Collection Date: 07/30/04 15:00
Date Received: 07/30/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50		SW8260B	08/06/04 12:50 / hjc
Acrylonitrile	ND	mg/m3		50		SW8260B	08/06/04 12:50 / hjc
Benzene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Bromochloromethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Bromodichloromethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Bromoform	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Bromomethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Carbon disulfide	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Carbon tetrachloride	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Chlorobenzene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Chlorodibromomethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Chloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Chloroform	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Chloromethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,2-Dibromoethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Dibromomethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Dichlorodifluoromethane	11	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,1-Dichloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,2-Dichloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,1-Dichloroethene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
cis-1,2-Dichloroethene	17	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,2-Dichloropropane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Ethylbenzene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
2-Hexanone	ND	mg/m3		50		SW8260B	08/06/04 12:50 / hjc
Iodomethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Methyl ethyl ketone	ND	mg/m3		50		SW8260B	08/06/04 12:50 / hjc
Methyl isobutyl ketone	ND	mg/m3		50		SW8260B	08/06/04 12:50 / hjc
Methylene chloride	1.4	mg/m3	J	2.5		SW8260B	08/06/04 12:50 / hjc
Styrene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H04080007-001
Client Sample ID: Carroll College Stack

Report Date: 08/11/04
Collection Date: 07/30/04 15:00
Date Received: 07/30/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	2.4	mg/m3	J	2.5		SW8260B	08/06/04 12:50 / hjc
Toluene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Trichloroethene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Vinyl acetate	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Vinyl chloride	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
o-Xylene	ND	mg/m3		2.5		SW8260B	08/06/04 12:50 / hjc
Surr: 1,2-Dichloroethane-d4	91.2	%REC			70-130	SW8260B	08/06/04 12:50 / hjc
Surr: Dibromofluoromethane	103	%REC			77-126	SW8260B	08/06/04 12:50 / hjc
Surr: p-Bromofluorobenzene	102	%REC			76-127	SW8260B	08/06/04 12:50 / hjc
Surr: Toluene-d8	101	%REC			79-122	SW8260B	08/06/04 12:50 / hjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena Carroll College Stack
Lab ID: H04040218-001
Client Sample ID: Carroll College Stack

Report Date: 05/18/04
Collection Date: 04/29/04 16:00
Date Received: 04/30/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50		SW8260B	05/17/04 18:39 / beg
Acrylonitrile	ND	mg/m3		50		SW8260B	05/17/04 18:39 / beg
Benzene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Bromochloromethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Bromodichloromethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Bromoform	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Bromomethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Carbon disulfide	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Carbon tetrachloride	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Chlorobenzene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Chlorodibromomethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Chloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Chloroform	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Chloromethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,2-Dibromoethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Dibromomethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,2-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,4-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Dichlorodifluoromethane	2.6	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,1-Dichloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,2-Dichloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,1-Dichloroethene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
cis-1,2-Dichloroethene	0.69	mg/m3	J	2.5		SW8260B	05/17/04 18:39 / beg
trans-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,2-Dichloropropane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
cis-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
trans-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Ethylbenzene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
2-Hexanone	ND	mg/m3		50		SW8260B	05/17/04 18:39 / beg
Iodomethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Methyl ethyl ketone	ND	mg/m3		50		SW8260B	05/17/04 18:39 / beg
Methyl isobutyl ketone	ND	mg/m3		50		SW8260B	05/17/04 18:39 / beg
Methylene chloride	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Styrene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: 1273 City of Helena Carroll College Stack
Lab ID: H04040218-001
Client Sample ID: Carroll College Stack

Report Date: 05/18/04
Collection Date: 04/29/04 16:00
Date Received: 04/30/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Toluene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Trichloroethene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Vinyl acetate	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Vinyl chloride	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
o-Xylene	ND	mg/m3		2.5		SW8260B	05/17/04 18:39 / beg
Surr: 1,2-Dichloroethane-d4	82.4	%REC			70-130	SW8260B	05/17/04 18:39 / beg
Surr: Dibromofluoromethane	96.4	%REC			70-130	SW8260B	05/17/04 18:39 / beg
Surr: p-Bromofluorobenzene	100	%REC			70-130	SW8260B	05/17/04 18:39 / beg
Surr: Toluene-d8	107	%REC			70-130	SW8260B	05/17/04 18:39 / beg

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H04010082-001
Client Sample ID: Carroll College Stack

Report Date: 01/28/04
Collection Date: 01/22/04 12:45
Date Received: 01/22/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50		SW8260B	01/26/04 16:37 / beg
Acrylonitrile	ND	mg/m3		50		SW8260B	01/26/04 16:37 / beg
Benzene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Bromochloromethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Bromodichloromethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Bromoform	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Bromomethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Carbon disulfide	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Carbon tetrachloride	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Chlorobenzene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Chlorodibromomethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Chloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Chloroform	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Chloromethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,2-Dibromoethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Dibromomethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,2-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,4-Dichlorobenzene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Dichlorodifluoromethane	3.4	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,1-Dichloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,2-Dichloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,1-Dichloroethene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
cis-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
trans-1,2-Dichloroethene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,2-Dichloropropane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
cis-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
trans-1,3-Dichloropropene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Ethylbenzene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
2-Hexanone	ND	mg/m3		50		SW8260B	01/26/04 16:37 / beg
Iodomethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Methyl ethyl ketone	ND	mg/m3		50		SW8260B	01/26/04 16:37 / beg
Methyl isobutyl ketone	ND	mg/m3		50		SW8260B	01/26/04 16:37 / beg
Methylene chloride	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Styrene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H04010082-001
Client Sample ID: Carroll College Stack

Report Date: 01/28/04
Collection Date: 01/22/04 12:45
Date Received: 01/22/04
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Toluene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Trichloroethene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Vinyl acetate	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Vinyl chloride	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
o-Xylene	ND	mg/m3		2.5		SW8260B	01/26/04 16:37 / beg
Surr: 1,2-Dichloroethane-d4	108	%REC			70-130	SW8260B	01/26/04 16:37 / beg
Surr: Dibromofluoromethane	98.0	%REC			70-130	SW8260B	01/26/04 16:37 / beg
Surr: p-Bromofluorobenzene	104	%REC			70-130	SW8260B	01/26/04 16:37 / beg
Surr: Toluene-d8	90.8	%REC			70-130	SW8260B	01/26/04 16:37 / beg

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H03100156-001
Client Sample ID: Carroll College Stack

Report Date: 11/13/03
Collection Date: 10/29/03 12:40
Date Received: 10/29/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		10		SW8260B	11/12/03 16:04 / beg
Acrylonitrile	ND	mg/m3		10		SW8260B	11/12/03 16:04 / beg
Benzene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Bromochloromethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Bromodichloromethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Bromoform	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Bromomethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Carbon disulfide	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Carbon tetrachloride	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Chlorobenzene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Chlorodibromomethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Chloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Chloroform	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Chloromethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,2-Dibromo-3-chloropropane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,2-Dibromoethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Dibromomethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,2-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,4-Dichlorobenzene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
trans-1,4-Dichloro-2-butene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Dichlorodifluoromethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,1-Dichloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,2-Dichloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,1-Dichloroethene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
cis-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
trans-1,2-Dichloroethene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,2-Dichloropropane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
cis-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
trans-1,3-Dichloropropene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Ethylbenzene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
2-Hexanone	ND	mg/m3		10		SW8260B	11/12/03 16:04 / beg
Iodomethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Methyl ethyl ketone	ND	mg/m3		10		SW8260B	11/12/03 16:04 / beg
Methyl isobutyl ketone	ND	mg/m3		10		SW8260B	11/12/03 16:04 / beg
Methylene chloride	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Styrene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,1,1,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,1,2,2-Tetrachloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College Stack
Lab ID: H03100156-001
Client Sample ID: Carroll College Stack

Report Date: 11/13/03
Collection Date: 10/29/03 12:40
Date Received: 10/29/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Toluene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,1,1-Trichloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,1,2-Trichloroethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Trichloroethene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Trichlorofluoromethane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
1,2,3-Trichloropropane	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Vinyl acetate	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Vinyl chloride	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
m+p-Xylenes	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
o-Xylene	ND	mg/m3		0.50		SW8260B	11/12/03 16:04 / beg
Surr: 1,2-Dichloroethane-d4	105	%REC			70-130	SW8260B	11/12/03 16:04 / beg
Surr: Dibromofluoromethane	108	%REC			70-130	SW8260B	11/12/03 16:04 / beg
Surr: p-Bromofluorobenzene	109	%REC			70-130	SW8260B	11/12/03 16:04 / beg
Surr: Toluene-d8	107	%REC			70-130	SW8260B	11/12/03 16:04 / beg

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena YMCA and Carroll College Stack Samp
Lab ID: H03070167-002
Client Sample ID: Carroll College Stack

Report Date: 08/20/03
Collection Date: 07/29/03 10:30
Date Received: 07/30/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50.0		SW8260B	08/11/03 13:34 / hjc
Acrylonitrile	ND	mg/m3		50.0		SW8260B	08/11/03 13:34 / hjc
Benzene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Bromochloromethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Bromodichloromethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Bromoform	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Bromomethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Carbon disulfide	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Carbon tetrachloride	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Chlorobenzene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Chlorodibromomethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Chloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Chloroform	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Chloromethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,2-Dibromoethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Dibromomethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Dichlorodifluoromethane	4.44	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,1-Dichloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,2-Dichloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,1-Dichloroethene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,2-Dichloropropane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Ethylbenzene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
2-Hexanone	ND	mg/m3		50.0		SW8260B	08/11/03 13:34 / hjc
Iodomethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Methyl ethyl ketone	ND	mg/m3		50.0		SW8260B	08/11/03 13:34 / hjc
Methyl isobutyl ketone	ND	mg/m3		50.0		SW8260B	08/11/03 13:34 / hjc
Methylene chloride	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Styrene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena YMCA and Carroll College Stack Samp
Lab ID: H03070167-002
Client Sample ID: Carroll College Stack

Report Date: 08/20/03
Collection Date: 07/29/03 10:30
Date Received: 07/30/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Toluene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Trichloroethene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Trichlorofluoromethane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Vinyl acetate	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Vinyl chloride	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
m+p-Xylenes	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
o-Xylene	ND	mg/m3		2.50		SW8260B	08/11/03 13:34 / hjc
Surr: 1,2-Dichloroethane-d4	96.8	%REC			70-130	SW8260B	08/11/03 13:34 / hjc
Surr: Dibromofluoromethane	110	%REC			77-126	SW8260B	08/11/03 13:34 / hjc
Surr: p-Bromofluorobenzene	106	%REC			76-127	SW8260B	08/11/03 13:34 / hjc
Surr: Toluene-d8	103	%REC			79-122	SW8260B	08/11/03 13:34 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College, 1273
Lab ID: H03040147-001
Client Sample ID: Carroll College-Stack Gas Sample

Report Date: 05/19/03
Collection Date: 04/30/03 11:30
Date Received: 04/30/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50.0		SW8260B	05/13/03 14:06 / hjc
Acrylonitrile	ND	mg/m3		50.0		SW8260B	05/13/03 14:06 / hjc
Benzene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Bromochloromethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Bromodichloromethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Bromoform	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Bromomethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Carbon disulfide	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Carbon tetrachloride	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Chlorobenzene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Chlorodibromomethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Chloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Chloroform	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Chloromethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,2-Dibromoethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Dibromomethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Dichlorodifluoromethane	2.2	mg/m3	J	2.50		SW8260B	05/13/03 14:06 / hjc
1,1-Dichloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,2-Dichloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,1-Dichloroethene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,2-Dichloropropane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Ethylbenzene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
2-Hexanone	ND	mg/m3		50.0		SW8260B	05/13/03 14:06 / hjc
Iodomethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Methyl ethyl ketone	ND	mg/m3		50.0		SW8260B	05/13/03 14:06 / hjc
Methyl isobutyl ketone	ND	mg/m3		50.0		SW8260B	05/13/03 14:06 / hjc
Methylene chloride	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Styrene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College, 1273
Lab ID: H03040147-001
Client Sample ID: Carroll College-Stack Gas Sample

Report Date: 05/19/03
Collection Date: 04/30/03 11:30
Date Received: 04/30/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Toluene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Trichloroethene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Trichlorofluoromethane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Vinyl acetate	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Vinyl chloride	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
m+p-Xylenes	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
o-Xylene	ND	mg/m3		2.50		SW8260B	05/13/03 14:06 / hjc
Surr: 1,2-Dichloroethane-d4	104	%REC			70-130	SW8260B	05/13/03 14:06 / hjc
Surr: Dibromofluoromethane	104	%REC			77-126	SW8260B	05/13/03 14:06 / hjc
Surr: p-Bromofluorobenzene	95.6	%REC			76-127	SW8260B	05/13/03 14:06 / hjc
Surr: Toluene-d8	102	%REC			79-122	SW8260B	05/13/03 14:06 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College
Lab ID: H03010073-001
Client Sample ID: Carroll College

Report Date: 02/14/03
Collection Date: 01/21/03 13:45
Date Received: 01/22/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50.0		SW8260B	01/31/03 16:36 / hjc
Acrylonitrile	ND	mg/m3		50.0		SW8260B	01/31/03 16:36 / hjc
Benzene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Bromochloromethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Bromodichloromethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Bromoform	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Bromomethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Carbon disulfide	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Carbon tetrachloride	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Chlorobenzene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Chlorodibromomethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Chloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Chloroform	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Chloromethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,2-Dibromoethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Dibromomethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Dichlorodifluoromethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,1-Dichloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,2-Dichloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,1-Dichloroethene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,2-Dichloropropane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Ethylbenzene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
2-Hexanone	ND	mg/m3		50.0		SW8260B	01/31/03 16:36 / hjc
Iodomethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Methyl ethyl ketone	ND	mg/m3		50.0		SW8260B	01/31/03 16:36 / hjc
Methyl isobutyl ketone	ND	mg/m3		50.0		SW8260B	01/31/03 16:36 / hjc
Methylene chloride	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Styrene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



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LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College
Lab ID: H03010073-001
Client Sample ID: Carroll College

Report Date: 02/14/03
Collection Date: 01/21/03 13:45
Date Received: 01/22/03
Matrix: Air

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Toluene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Trichloroethene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Trichlorofluoromethane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Vinyl acetate	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Vinyl chloride	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
m+p-Xylenes	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
o-Xylene	ND	mg/m3		2.50		SW8260B	01/31/03 16:36 / hjc
Surr: 1,2-Dichloroethane-d4	82.0	%REC			70-130	SW8260B	01/31/03 16:36 / hjc
Surr: Dibromofluoromethane	96.4	%REC			77-126	SW8260B	01/31/03 16:36 / hjc
Surr: p-Bromofluorobenzene	95.6	%REC			76-127	SW8260B	01/31/03 16:36 / hjc
Surr: Toluene-d8	100	%REC			79-122	SW8260B	01/31/03 16:36 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Landfill
Lab ID: H02100133-002
Client Sample ID: Carroll College Stack Gas

Report Date: 11/04/02
Collection Date: 10/23/02 12:15
Date Received: 10/23/02
Matrix: AIR

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50.0		SW8260B	10/28/02 14:55 / hjc
Acrylonitrile	ND	mg/m3		50.0		SW8260B	10/28/02 14:55 / hjc
Benzene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Bromochloromethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Bromodichloromethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Bromoform	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Bromomethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Carbon disulfide	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Carbon tetrachloride	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Chlorobenzene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Chlorodibromomethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Chloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Chloroform	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Chloromethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,2-Dibromoethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Dibromomethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Dichlorodifluoromethane	2.0	mg/m3	J	2.50		SW8260B	10/28/02 14:55 / hjc
1,1-Dichloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,2-Dichloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,1-Dichloroethene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,2-Dichloropropane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Ethylbenzene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
2-Hexanone	ND	mg/m3		50.0		SW8260B	10/28/02 14:55 / hjc
Iodomethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Methyl ethyl ketone	ND	mg/m3		50.0		SW8260B	10/28/02 14:55 / hjc
Methyl isobutyl ketone	ND	mg/m3		50.0		SW8260B	10/28/02 14:55 / hjc
Methylene chloride	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Styrene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



ENERGY LABORATORIES, INC. • P.O. Box 5688 • 2704 Billings Avenue • Helena, MT 59604
877-472-0711 • 406-442-0711 • 406-442-0712 fax • debg@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Landfill
Lab ID: H02100133-002
Client Sample ID: Carroll College Stack Gas

Report Date: 11/04/02
Collection Date: 10/23/02 12:15
Date Received: 10/23/02
Matrix: AIR

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Toluene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Trichloroethene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Trichlorofluoromethane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Vinyl acetate	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Vinyl chloride	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
m+p-Xylenes	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
o-Xylene	ND	mg/m3		2.50		SW8260B	10/28/02 14:55 / hjc
Surr: 1,2-Dichloroethane-d4	98.0	%REC			70-130	SW8260B	10/28/02 14:55 / hjc
Surr: Dibromofluoromethane	112	%REC			77-126	SW8260B	10/28/02 14:55 / hjc
Surr: p-Bromofluorobenzene	117	%REC			76-127	SW8260B	10/28/02 14:55 / hjc
Surr: Toluene-d8	108	%REC			79-122	SW8260B	10/28/02 14:55 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College
Lab ID: H02070151-001
Client Sample ID: Carroll College StackGas

Report Date: 08/16/02
Collection Date: 07/25/02 14:30
Date Received: 07/25/02
Matrix: AIR

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50.0		SW8260B	08/05/02 12:41 / hjc
Acrylonitrile	ND	mg/m3		50.0		SW8260B	08/05/02 12:41 / hjc
Benzene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Bromochloromethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Bromodichloromethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Bromoform	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Bromomethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Carbon disulfide	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Carbon tetrachloride	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Chlorobenzene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Chlorodibromomethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Chloroethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Chloroform	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Chloromethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,2-Dibromoethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Dibromomethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Dichlorodifluoromethane	1.0	mg/m3	J	2.50		SW8260B	08/05/02 12:41 / hjc
1,1-Dichloroethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,2-Dichloroethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,1-Dichloroethene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
cis-1,2-Dichloroethene	2.87	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,2-Dichloropropane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Ethylbenzene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
2-Hexanone	ND	mg/m3		50.0		SW8260B	08/05/02 12:41 / hjc
Iodomethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Methyl ethyl ketone	ND	mg/m3		50.0		SW8260B	08/05/02 12:41 / hjc
Methyl isobutyl ketone	ND	mg/m3		50.0		SW8260B	08/05/02 12:41 / hjc
Methylene chloride	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
Styrene	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	08/05/02 12:41 / hjc

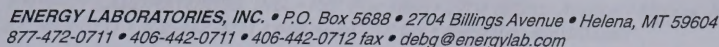
Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



Client: Hydrometrics Inc-Helena
Project: City of Helena Carroll College
Lab ID: H02070151-001
Client Sample ID: Carroll College StackGas

Report Date: 08/16/02
Collection Date: 07/25/02 14:30
Date Received: 07/25/02
Matrix: AIR

Report	RL - Analyte reporting limit.	MCL - Maximum contaminant level.
Definitions:	QCL - Quality control limit.	ND - Not detected at the reporting limit.
	J - Estimated value. The analyte was present but less than the reporting limit.	



LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena 1273 51.500
Lab ID: H02050004-001
Client Sample ID: Carroll College Stack

Report Date: 06/10/02
Collection Date: 04/30/02 17:00
Date Received: 04/30/02
Matrix: AIR

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Acetone	ND	mg/m3		50.0		SW8260B	05/20/02 12:55 / hjc
Acrylonitrile	ND	mg/m3		50.0		SW8260B	05/20/02 12:55 / hjc
Benzene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Bromochloromethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Bromodichloromethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Bromoform	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Bromomethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Carbon disulfide	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Carbon tetrachloride	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Chlorobenzene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Chlorodibromomethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Chloroethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Chloroform	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Chloromethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,2-Dibromo-3-chloropropane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,2-Dibromoethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Dibromomethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,2-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,4-Dichlorobenzene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
trans-1,4-Dichloro-2-butene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Dichlorodifluoromethane	0.30	mg/m3	J	2.50		SW8260B	05/20/02 12:55 / hjc
1,1-Dichloroethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,2-Dichloroethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,1-Dichloroethene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
cis-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
trans-1,2-Dichloroethene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,2-Dichloropropane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
cis-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
trans-1,3-Dichloropropene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Ethylbenzene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
2-Hexanone	ND	mg/m3		50.0		SW8260B	05/20/02 12:55 / hjc
Iodomethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Methyl ethyl ketone	ND	mg/m3		50.0		SW8260B	05/20/02 12:55 / hjc
Methyl isobutyl ketone	ND	mg/m3		50.0		SW8260B	05/20/02 12:55 / hjc
Methylene chloride	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
Styrene	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,1,1,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc
1,1,2,2-Tetrachloroethane	ND	mg/m3		2.50		SW8260B	05/20/02 12:55 / hjc

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

J - Estimated value. The analyte was present but less than the reporting limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client: Hydrometrics Inc-Helena
Project: City of Helena 1273 51.500
Lab ID: H02050004-001
Client Sample ID: Carroll College Stack

Report Date: 06/04/02
Collection Date: 04/30/02 17:00
Date Received: 04/30/02
Matrix: AIR

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
VOLATILE ORGANIC COMPOUNDS							
Tetrachloroethene	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
Toluene	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
1,1,1-Trichloroethane	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
1,1,2-Trichloroethane	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
Trichloroethene	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
Trichlorofluoromethane	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
1,2,3-Trichloropropane	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
Vinyl acetate	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
Vinyl chloride	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
m+p-Xylenes	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
o-Xylene	ND	mg/m3		2.5		SW8260B	05/20/02 12:55 / hjc
Surr: 1,2-Dichloroethane-d4	102	%REC			72-116	SW8260B	05/20/02 12:55 / hjc
Surr: Dibromofluoromethane	111	%REC			74-121	SW8260B	05/20/02 12:55 / hjc
Surr: p-Bromofluorobenzene	109	%REC			87-124	SW8260B	05/20/02 12:55 / hjc
Surr: Toluene-d8	106	%REC			85-115	SW8260B	05/20/02 12:55 / hjc

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

EPA METHOD 8260B

Client: **Hydrometrics**
 Sample ID: **CARROLL COLLEGE STACK**
 Project Info: **PROJ. NO. 1273B2 CITY HELENA**
 Lab ID: **002-01-90913**
 Matrix: **AIR**

Date Reported: **08/13/01**
 Date Sampled: **07/25/01 14:45**
 Date Received: **07/25/01**
 Date Analyzed: **08/08/01 16:07**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	LIMIT OF
		(mg/m3)	QUANTITATION(mg/m3)
67-64-1	Acetone	ND	100
107-13-1	Acrylonitrile	ND	100
71-43-2	Benzene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
75-25-2	Bromoform	ND	2.5
74-83-9	Bromomethane	ND,1	2.5
75-15-0	Carbon disulfide	ND	5.0
56-23-5	Carbon tetrachloride	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
124-48-1	Chlorodibromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
67-66-3	Chloroform	ND	2.5
74-87-3	Chloromethane	ND	2.5
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5
106-93-4	1,2-Dibromoethane	ND	2.5
74-95-3	Dibromomethane	ND	2.5
95-50-1	1,2-Dichlorobenzene	ND	2.5
106-46-7	1,4-Dichlorobenzene	ND	2.5
110-57-6	trans-1,4-Dichloro-2-butene	ND	10
75-71-8	Dichlorodifluoromethane	5.7	1.0
75-34-3	1,1-Dichloroethane	ND	2.5
107-06-2	1,2-Dichloroethane	ND	2.5
75-35-4	1,1-Dichloroethene	ND	2.5
156-59-2	cis-1,2-Dichloroethene	4.8	2.5
156-60-5	trans-1,2-Dichloroethene	ND	2.5
78-87-5	1,2-Dichloropropane	ND	2.5
10061-01-5	cis-1,3-Dichloropropene	ND	2.5
10061-02-6	trans-1,3-Dichloropropene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
591-78-6	2-Hexanone	ND	100
74-88-4	Iodomethane	ND	5.0
78-93-3	Methyl ethyl ketone	ND	100
108-10-1	Methyl isobutyl ketone	ND	100
75-09-2	Methylene chloride	2.6	2.5
100-42-5	Styrene	ND	2.5
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5
127-18-4	Tetrachloroethene	ND	2.5
108-88-3	Toluene	ND	2.5
71-55-6	1,1,1-Trichloroethane	ND	2.5
79-00-5	1,1,2-Trichloroethane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
96-18-4	1,2,3-Trichloropropane	ND	2.5

EPA METHOD 8260B(Continued)

 Client: **Hydrometrics**
 Sample ID: **CARROLL COLLEGE STACK**

 Date Reported: **08/13/01**
 Lab ID: **002-01-90913**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m3)	LIMIT OF QUANTITATION(mg/m3)
108-05-4	Vinyl acetate	ND	5.0
75-01-4	Vinyl chloride	ND	2.5
108383/106423	m+p-Xylenes	ND	2.5
95-47-6	o-Xylene	ND	2.5

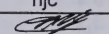
ND= Indicates compound was analyzed for but not detected.

 1= The recovery for this compound in the continuin calibration verification
 was below the laboratory standard operating procedure QC advisory limit.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(mg/m3)		PERCENT RECOVERY	ACCEPTANCE RANGE
	ADDED	MEASURED		
Dibromofluoromethane	50	46.8	94	74--120
1,2-Dichloroethane d4	50	50.9	102	80--120
Toluene d8	50	47.1	94	80--120
p-Bromofluorobenzene	50	47.8	96	80--120

REPORT COMMENTS: None

 Analyst: hjc
 Reviewed: 

EPA METHOD 8260B

Client: **Hydrometrics**
Sample ID: **CARROLL COLLEGE STACK**
Project Info: **PROJ NO. 0448 CITY OF HELENA**
Lab ID: **002-01-90134**
Matrix: **AIR**

Date Reported: **02/15/01**
Date Sampled: **02/06/01 15:15**
Date Received: **02/07/01**
Date Analyzed: **02/14/01 17:04**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	LIMIT OF QUANTITATION(mg/m ³)
71-43-2	Benzene	ND	2.5
108-86-1	Bromobenzene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
75-25-2	Bromoform	ND	2.5
74-83-9	Bromomethane	ND	2.5
56-23-5	Carbon tetrachloride	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
124-48-1	Chlorodibromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
110-75-8	2-Chloroethylvinyl ether	ND	2.5
67-66-3	Chloroform	ND	2.5
74-87-3	Chloromethane	ND	2.5
95-49-8	2-Chlorotoluene	ND	2.5
106-43-4	4-Chlorotoluene	ND	2.5
106-93-4	1,2-Dibromoethane	ND	2.5
74-95-3	Dibromomethane	ND	2.5
95-50-1	1,2-Dichlorobenzene	ND	2.5
541-73-1	1,3-Dichlorobenzene	ND	2.5
106-46-7	1,4-Dichlorobenzene	ND	2.5
75-71-8	Dichlorodifluoromethane	12	2.5
75-34-3	1,1-Dichloroethane	ND	2.5
107-06-2	1,2-Dichloroethane	ND	2.5
75-35-4	1,1-Dichloroethene	ND	2.5
156-59-2	cis-1,2-Dichloroethene	(1.2)J	2.5
156-60-5	trans-1,2-Dichloroethene	ND	2.5
78-87-5	1,2-Dichloropropane	ND	2.5
142-28-9	1,3-Dichloropropane	ND	2.5
594-20-7	2,2-Dichloropropane	ND	2.5
563-58-6	1,1-Dichloropropene	ND	2.5
10061-01-5	cis-1,3-Dichloropropene	ND	2.5
10061-02-6	trans-1,3-Dichloropropene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
1634-04-4	Methyl-t-butyl ether	ND	2.5
78-93-3	Methyl ethyl ketone	ND	100
75-09-2	Methylene chloride	ND	2.5
100-42-5	Styrene	ND	2.5
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5
127-18-4	Tetrachloroethene	ND	2.5
108-88-3	Toluene	ND	2.5
71-55-6	1,1,1-Trichloroethane	ND	2.5
79-00-5	1,1,2-Trichloroethane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-69-4	Trichlorofluoromethane	(1.0)J	2.5

EPA METHOD 8260B(Continued)

Client: **Hydrometrics**
Sample ID: **CARROLL COLLEGE STACK**

Date Reported: **02/15/01**
Lab ID: **002-01-90134**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	LIMIT OF QUANTITATION(mg/m ³)
96-18-4	1,2,3-Trichloropropane	ND	2.5
75-01-4	Vinyl chloride	ND	2.5
108383/106423	m+p-Xylenes	ND	2.5
95-47-6	o-Xylene	ND	2.5

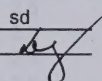
ND= Indicates compound was analyzed for but not detected.

J= Estimated value. Present, but less than the limit of quantitation.

Runtime Quality Assurance Report

SYSTEM MONITORING COMPOUNDS	CONCENTRATION(mg/m ³)		PERCENT RECOVERY	ACCEPTANCE RANGE
	ADDED	MEASURED		
Dibromofluoromethane	50	50.6	101	74--120
1,2-Dichloroethane d4	50	53.2	106	80--120
Toluene d8	50	48.6	97	80--120
p-Bromofluorobenzene	50	42.2	84	80--120

REPORT COMMENTS: None

Analyst: sd
Reviewed: 

EPA METHOD 8260B

Client: **Hydrometrics**
Sample ID: **CARROLL COLLEGE BLOWER**
Project Info: **PROJ NO: 0448, CITY OF HELENA**
Lab ID: **002-00-91099**
Matrix: **AIR**

Date Reported: **01/24/01**
Date Sampled: **12/21/00 13:45**
Date Received: **12/21/00**
Date Analyzed: **01/02/01 16:43**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION (mg/m ³)	LIMIT OF QUANTITATION(mg/m ³)
67-64-1	Acetone	ND	100
107-13-1	Acrylonitrile	ND(E)	100
71-43-2	Benzene	ND	2.5
74-97-5	Bromochloromethane	ND	2.5
75-27-4	Bromodichloromethane	ND	2.5
75-25-2	Bromoform	ND	2.5
74-83-9	Bromomethane	ND	2.5
75-15-0	Carbon disulfide	ND	5.0
56-23-5	Carbon tetrachloride	ND	2.5
108-90-7	Chlorobenzene	ND	2.5
124-48-1	Chlorodibromomethane	ND	2.5
75-00-3	Chloroethane	ND	2.5
67-66-3	Chloroform	ND	2.5
74-87-3	Chloromethane	ND	2.5
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5
106-93-4	1,2-Dibromoethane	ND	2.5
74-95-3	Dibromomethane	ND	2.5
95-50-1	1,2-Dichlorobenzene	ND	2.5
106-46-7	1,4-Dichlorobenzene	ND	2.5
110-57-6	trans-1,4-Dichloro-2-butene	ND(E)	2.5
75-71-8	Dichlorodifluoromethane	5.4	2.5
75-34-3	1,1-Dichloroethane	ND	2.5
107-06-2	1,2-Dichloroethane	ND	2.5
75-35-4	1,1-Dichloroethene	ND	2.5
156-59-2	cis-1,2-Dichloroethene	ND	2.5
156-60-5	trans-1,2-Dichloroethene	ND	10
78-87-5	1,2-Dichloropropane	ND	2.5
10061-01-5	cis-1,3-Dichloropropene	ND	2.5
10061-02-6	trans-1,3-Dichloropropene	ND	2.5
100-41-4	Ethylbenzene	ND	2.5
591-78-6	2-Hexanone	ND(E)	100
74-88-4	Iodomethane	ND(E)	5.0
78-93-3	Methyl ethyl ketone	ND(E)	100
108-10-1	Methyl isobutyl ketone	ND(E)	100
75-09-2	Methylene chloride	ND	2.5
100-42-5	Styrene	ND	2.5
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.5
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.5
127-18-4	Tetrachloroethene	ND	2.5
108-88-3	Toluene	ND	2.5
71-55-6	1,1,1-Trichloroethane	ND	2.5
79-00-5	1,1,2-Trichloroethane	ND	2.5
79-01-6	Trichloroethene	ND	2.5
75-69-4	Trichlorofluoromethane	ND	2.5
96-18-4	1,2,3-Trichloropropane	ND	2.5

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Hydrometrics, Proj No. 0448, City of Helena
 Project: None
 Sample ID: CARROLL COLLEGE TRENCH
 Laboratory ID: 00-90907-2
 Matrix: Waste
 Dilution Factor: 1

Date Sampled: 10-26-00
 Time Sampled: 14:40
 Date/Time Received: 10-26-00 00:00
 Date Analyzed: 10-30-00
 Date Reported: November 8, 2000

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(mg/m ³)	LIMIT (mg/m ³)
75-71-8	Dichlorodifluoromethane	6.93	1.00
74-87-3	Chloromethane	ND	1.00
75-01-4	Vinyl chloride (Chloroethene)	ND	1.00
74-83-9	Bromomethane	ND	1.00
75-00-3	Chloroethane	ND	1.00
75-69-4	Trichlorofluoromethane	ND	1.00
67-64-1	Acetone (2-Propanone)	ND	20.0
75-35-4	1,1 - Dichloroethene	ND	1.00
74-88-4	Iodomethane (Methyl iodide)	ND	1.00
107-13-1	Acrylonitrile (2-Propenenitrile)	ND	20.0
75-09-2	Methylene chloride (Dichloromethane)	ND	1.00
75-15-0	Carbon disulfide	ND	1.00
156-60-5	trans - 1, 2 - Dichloroethene	ND	1.00
75-34-3	1,1 - Dichloroethane	ND	1.00
108-05-4	Vinyl acetate (Acetic acid ethenyl ester)	ND	1.00
78-93-3	2 - Butanone (MEK)	ND	20.0
156-59-2	cis - 1,2 - Dichloroethene	6.23	1.00
74-97-5	Bromochloromethane	ND	1.00
67-66-3	Chloroform (Trichloromethane)	ND	1.00
71-55-6	1,1,1 - Trichloroethane	ND	1.00
107-06-2	1,2 - Dichloroethane	ND	1.00
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	1.00
71-43-2	Benzene	ND	1.00
74-95-3	Dibromomethane	ND	1.00
78-87-5	1,2 - Dichloropropane	ND	1.00
79-01-6	Trichloroethene	ND	1.00
10061-01-5	cis - 1,3 - Dichloropropene	ND	1.00
108-10-1	4 - Methyl - 2 - pentanone (MIBK)	ND	20.0
10061-02-6	trans - 1,3 - Dichloropropene	ND	1.00
79-00-5	1,1,2 - Trichloroethane	ND	1.00
108-88-3	Toluene	ND	1.00
106-93-4	1,2 - Dibromoethane (EDB)	ND	1.00
591-78-6	2 - Hexanone	ND	20.0
124-48-1	Dibromochloromethane	ND	1.00
127-18-4	Tetrachloroethene	ND	1.00

ND - Analyte not detected at stated limit of detection

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Hydrometrics
 Sample ID: CARROLL COLLEGE STACK
 Laboratory ID: 00-90766-1

Date Sampled: 09-22-00
 Date Analyzed: 09-27-00
 Date Reported: October 6, 2000

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(mg/m ³)	LIMIT (mg/m ³)
630-20-6	1,1,1,2 - Tetrachloroethane	ND	1.00
108-90-7	Chlorobenzene	ND	1.00
100-41-4	Ethylbenzene	ND	1.00
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	2.00
75-25-2	Bromoform (Tribromomethane)	ND	1.00
100-42-5	Styrene (Ethenylbenzene)	ND	1.00
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	1.00
79-34-5	1,1,2,2 - Tetrachloroethane	ND	1.00
96-18-4	1,2,3 - Trichloropropane	ND	1.00
110-57-6	trans - 1,4 - Dichloro - 2 - butene	ND	1.00
106-46-7	1,4 - Dichlorobenzene	ND	1.00
95-50-1	1,2 - Dichlorobenzene	ND	1.00
96-12-8	1,2 - Dibromo - 3 - chloropropane (DBCP)	ND	5.00

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL AREA	PERCENT	ACCEPTANCE
			RECOVERY	RANGE
Pentafluorobenzene	728897	736027	99.0%	50 - 200 %
Fluorobenzene	1109456	1126998	98.4%	50 - 200 %
1,4 - Difluorobenzene	945689	955717	99.0%	50 - 200 %
Chlorobenzene - d5	737376	734396	100%	50 - 200 %
1,4 - Dichlorobenzene - d4	350688	354661	98.9%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
		RECOVERY	RANGE
Dibromofluoromethane	9.37	93.7%	86 - 118 %
Toluene - d8	10.1	101%	88 - 110 %
4 - Bromofluorobenzene	9.86	98.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.3	103%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client:	Hydrometrics	Date Sampled:	08-29-00
Project:	None	Time Sampled:	10:40
Sample ID:	CARROLL COLLEGE VENT	Date/Time Received:	08-29-00 00:00
Laboratory ID:	00-90638-2	Date Analyzed:	09-05-00
Matrix:	Air	Date Reported:	September 20, 2000
Dilution Factor:	1		

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(mg/m ³)	LIMIT (mg/m ³)
75-71-8	Dichlorodifluoromethane	4.67	0.50
74-87-3	Chloromethane	ND	0.50
75-01-4	Vinyl chloride (Chloroethene)	0.57	0.50
74-83-9	Bromomethane	ND	0.50
75-00-3	Chloroethane	ND	0.50
75-69-4	Trichlorofluoromethane	ND	0.50
75-35-4	1,1 - Dichloroethene	ND	0.50
75-09-2	Methylene chloride (Dichloromethane)	ND	0.50
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.50
75-34-3	1,1 - Dichloroethane	ND	0.50
78-93-3	2 -Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	1.34	0.50
74-97-5	Bromochloromethane	ND	0.50
67-66-3	Chloroform (Trichloromethane)	ND	0.50
594-20-7	2,2 - Dichloropropane	ND	0.50
71-55-6	1,1,1 - Trichloroethane	ND	0.50
107-06-2	1,2 - Dichloroethane	ND	0.50
563-58-6	1,1 - Dichloropropene	ND	0.50
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	0.50
71-43-2	Benzene	ND	0.50
74-95-3	Dibromomethane	ND	0.50
78-87-5	1,2 - Dichloropropane	ND	0.50
79-01-6	Trichloroethene	ND	0.50
75-27-4	Bromodichloromethane	ND	0.50
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.50
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.50
79-00-5	1,1,2 - Trichloroethane	ND	0.50
108-88-3	Toluene	ND	0.50
106-93-4	1,2 - Dibromoethane	ND	0.50
142-28-9	1,3 - Dichloropropane	ND	0.50
124-48-1	Dibromochloromethane	ND	0.50
127-18-4	Tetrachloroethene	0.69	0.50
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.50
108-90-7	Chlorobenzene	ND	0.50
100-41-4	Ethylbenzene	ND	0.50
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	1.00
75-25-2	Bromoform (Tribromomethane)	ND	0.50
100-42-5	Styrene (Ethenylbenzene)	ND	0.50
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	0.50
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.50
96-18-4	1,2,3 - Trichloropropane	ND	0.50

ND - Analyte not detected at stated limit of detection

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: **Hydrometrics**
 Sample ID: **CARROLL COLLEGE VENT**
 Laboratory ID: **00-90638-2**

Date Sampled: **08-29-00**
 Date Analyzed: **09-05-00**
 Date Reported: **September 20, 2000**

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(mg/m ³)	LIMIT (mg/m ³)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	0.50
108-86-1	Bromobenzene	ND	0.50
103-65-1	n - Propylbenzene	ND	0.50
95-49-8	2 - Chlorotoluene	ND	0.50
106-43-4	4 - Chlorotoluene	ND	0.50
108-67-8	1,3,5 - Trimethylbenzene	ND	0.50
98-06-6	tert - Butylbenzene	ND	0.50
95-63-6	1,2,4 - Trimethylbenzene	ND	0.50
135-98-8	sec - Butylbenzene	ND	0.50
541-73-1	1,3 - Dichlorobenzene	ND	0.50
106-46-7	1,4 - Dichlorobenzene	ND	0.50
99-87-6	4-Isopropyltoluene	ND	0.50
95-50-1	1,2 - Dichlorobenzene	ND	0.50
104-51-8	n - Butylbenzene	ND	0.50
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	2.50
120-82-1	1,2,4 - Trichlorobenzene	ND	0.50
91-20-3	Naphthalene	ND	0.50
87-68-3	Hexachlorobutadiene	ND	0.50
87-61-6	1,2,3 - Trichlorobenzene	ND	0.50

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT	ACCEPTANCE
		AREA	RECOVERY	RANGE
Pentafluorobenzene	697232	689677	101%	50 - 200 %
Fluorobenzene	1111676	1099677	101%	50 - 200 %
1,4 - Difluorobenzene	956120	953407	100%	50 - 200 %
Chlorobenzene - d5	711988	751191	94.8%	50 - 200 %
1,4 - Dichlorobenzene - d4	310996	391297	79.5%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT	ACCEPTANCE
Dibromofluoromethane	10.4	104%	86 - 118 %
Toluene - d8	10.0	100%	88 - 110 %
4 - Bromofluorobenzene	9.46	94.6%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.2	102%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client:	Hydrometrics, Inc	Date Sampled:	07-25-00
Project:	CITY OF HELENA	Time Sampled:	15:30
Sample ID:	BLOWER CC	Date Received:	07-31-00
Laboratory ID:	00-90478-2	Date Analyzed:	07-31-00
Matrix:	Gas - AIR	Date Reported:	October 2, 2000
Dilution Factor:	1		

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(mg/m ³)	LIMIT (mg/m ³)
75-71-8	Dichlorodifluoromethane	7.14	0.50
74-87-3	Chloromethane	ND	0.50
75-01-4	Vinyl chloride (Chloroethene)	ND	0.50
74-83-9	Bromomethane	ND	0.50
75-00-3	Chloroethane	1.20	0.50
75-69-4	Trichlorofluoromethane	ND	0.50
75-35-4	1,1 - Dichloroethene	ND	0.50
75-09-2	Methylene chloride (Dichloromethane)	1.48	0.50
156-60-5	trans - 1, 2 - Dichloroethene	ND	0.50
75-34-3	1,1 - Dichloroethane	1.24	0.50
78-93-3	2 - Butanone (MEK)	ND	10.0
156-59-2	cis - 1,2 - Dichloroethene	16.2	0.50
74-97-5	Bromochloromethane	ND	0.50
67-66-3	Chloroform (Trichloromethane)	ND	0.50
594-20-7	2,2 - Dichloropropane	ND	0.50
71-55-6	1,1,1 - Trichloroethane	ND	0.50
107-06-2	1,2 - Dichloroethane	ND	0.50
563-58-6	1,1 - Dichloropropene	ND	0.50
56-23-5	Carbon tetrachloride (Tetrachloromethane)	ND	0.50
71-43-2	Benzene	ND	0.50
74-95-3	Dibromomethane	ND	0.50
78-87-5	1,2 - Dichloropropane	ND	0.50
79-01-6	Trichloroethene	0.91	0.50
75-27-4	Bromodichloromethane	ND	0.50
10061-01-5	cis - 1,3 - Dichloropropene	ND	0.50
10061-02-6	trans - 1,3 - Dichloropropene	ND	0.50
79-00-5	1,1,2 - Trichloroethane	ND	0.50
108-88-3	Toluene	ND	0.50
106-93-4	1,2 - Dibromoethane	ND	0.50
142-28-9	1,3 - Dichloropropane	ND	0.50
124-48-1	Dibromochloromethane	ND	0.50
127-18-4	Tetrachloroethene	0.91	0.50
630-20-6	1,1,1,2 - Tetrachloroethane	ND	0.50
108-90-7	Chlorobenzene	ND	0.50
100-41-4	Ethylbenzene	ND	0.50
108-38-3	m,p - Xylenes (1,3- & 1,4-Dimethylbenzene)	ND	1.00
75-25-2	Bromoform (Tribromomethane)	ND	0.50
100-42-5	Styrene (Ethenylbenzene)	ND	0.50
95-47-6	o - Xylene (1,2-Dimethylbenzene)	ND	0.50
79-34-5	1,1,2,2 - Tetrachloroethane	ND	0.50
96-18-4	1,2,3 - Trichloropropane	ND	0.50

ND - Analyte not detected at stated limit of detection

LABORATORY ANALYSIS REPORT, EPA METHOD 8260

Client: Hydrometrics, Inc
Sample ID: BLOWER CC
Laboratory ID: 00-90478-2

Date Sampled: 07-25-00
Date Analyzed: 07-31-00
Date Reported: October 2, 2000

C.A.S. #	TARGET COMPOUNDS	CONCENTRATION	REPORT
		(mg/m ³)	LIMIT (mg/m ³)
98-82-8	Isopropylbenzene (1-Methylethylbenzene)	ND	0.50
108-86-1	Bromobenzene	ND	0.50
103-65-1	n - Propylbenzene	ND	0.50
95-49-8	2 - Chlorotoluene	ND	0.50
106-43-4	4 - Chlorotoluene	ND	0.50
108-67-8	1,3,5 - Trimethylbenzene	ND	0.50
98-06-6	tert - Butylbenzene	ND	0.50
95-63-6	1,2,4 - Trimethylbenzene	ND	0.50
135-98-8	sec - Butylbenzene	ND	0.50
541-73-1	1,3 - Dichlorobenzene	ND	0.50
106-46-7	1,4 - Dichlorobenzene	ND	0.50
99-87-6	4-Isopropyltoluene	ND	0.50
95-50-1	1,2 - Dichlorobenzene	ND	0.50
104-51-8	n - Butylbenzene	ND	0.50
96-12-8	1,2 - Dibromo - 3 - chloropropane	ND	2.50
120-82-1	1,2,4 - Trichlorobenzene	ND	0.50
91-20-3	Naphthalene	ND	0.50
87-68-3	Hexachlorobutadiene	ND	0.50
87-61-6	1,2,3 - Trichlorobenzene	ND	0.50

ND - Analyte not detected at stated limit of detection

RUNTIME QUALITY ASSURANCE REPORT

INTERNAL STANDARDS	AREA	ICAL / CCAL	PERCENT RECOVERY	ACCEPTANCE
				RANGE
Pentafluorobenzene	376056	423676	88.8%	50 - 200 %
Fluorobenzene	659279	691977	95.3%	50 - 200 %
1,4 - Difluorobenzene	544768	585530	93.0%	50 - 200 %
Chlorobenzene - d5	414713	439484	94.4%	50 - 200 %
1,4 - Dichlorobenzene - d4	181260	210718	86.0%	50 - 200 %

SYSTEM MONITORING COMPOUNDS	CONCENTRATION	PERCENT RECOVERY	ACCEPTANCE
			RANGE
Dibromofluoromethane	10.6	106%	86 - 118 %
Toluene - d8	9.97	99.7%	88 - 110 %
4 - Bromofluorobenzene	9.59	95.9%	86 - 115 %
1,2 - Dichlorobenzene - d4	10.1	101%	80 - 120 %

METHODS USED IN THIS ANALYSIS:

EPA 5030B, EPA 8260B

APPENDIX D

SURFACE WATER SAMPLES VALIDATED DATA BASE

Sample Type: Surface Water

SITE CODE	POND	POND	POND	POND	POND	POND	POND
SAMPLE DATE	05/06/1990	08/29/2000	09/21/2000	10/23/2000	05/23/2001	07/02/2001	08/03/2001
SAMPLE TIME	11:35	08:35	19:11	12:10	08:30	10:00	08:10
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	90-10828	0010090637	0020090756	0010090887	0010190532	0010190781	0010190970
SAMPLE NUMBER	HL-9005-111	HL-0008-102	HL-0009-101	HL-0010-100	HL-0105-100	HL-0107-100	HL-0108-100
-- VOLATILE ORGANICS --							
1,1,1,2-TETRACHLOROETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,1,2,2-TETRACHLOROETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,1,2-TRICHLOROETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,1-DICHLOROETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,1-DICHLOROPROPENE	<0.001						
1,2-DIBROMOETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,2-DICHLOROPROPANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
2,2-DICHLOROPROPANE	<0.001						
2-BUTANONE (METHYL-ETHYL-KETONE)		<0.0005					
2-CHLOROTOLUENE	<0.001						
2-HEXANONE		<0.0005	<0.02	<0.02	<0.02	<0.02	<0.02
4-CHLOROTOLUENE	<0.001						
ACETONE		<0.0005	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE		<0.0005	<0.02	<0.02	<0.02	<0.02	<0.02
				UJ2			
BENZENE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
BROMOBENZENE	<0.001						
BROMOCHLOROMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
BROMODICHLOROMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
BROMOFORM	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
BROMOMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CARBON DISULFIDE		<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
				UJ2			
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CHLOROBENZENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CHLORODIBROMOMETHANE		<0.0005			<0.001	<0.001	<0.001
CHLOROETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CHLOROFORM	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CHLOROMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CIS-1,2-DICHLOROETHENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
CIS-1,3-DICHLOROPROPENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
DIBROMOCHLOROMETHANE	<0.001		<0.001	<0.0005			
DIBROMOMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
DICHLORODIFLUOROMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
ETHYLBENZENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
IODOMETHANE		<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
				UJ2			
M-XYLENE	<0.001						
M-P XYLENE		<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
O-XYLENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
P-XYLENE	<0.001						
METHYL ETHYL KETONE			<0.001	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE		<0.0005	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
STYRENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
TETRACHLOROETHENE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
TOLUENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

Sample Type: Surface Water

SITE CODE	POND	POND	POND	POND	POND	POND	POND
SAMPLE DATE	05/06/1990	08/29/2000	09/21/2000	10/23/2000	05/23/2001	07/02/2001	08/03/2001
SAMPLE TIME	11:35	08:35	19:11	12:10	08:30	10:00	08:10
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	90-10828	0010090637	0020090756	0010090887	0010190532	0010190781	0010190970
SAMPLE NUMBER	HL-9005-111	HL-0008-102	HL-0009-101	HL-0010-100	HL-0105-100	HL-0107-100	HL-0108-100

-- VOLATILE ORGANICS --

TRANS-1,2-DICHLOROETHENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
TRANS-1,3-DICHLOROPROPENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
TRICHLOROETHENE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
TRICHLOROFLUOROMETHANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
VINYL ACETATE		<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROBENZENE	<0.001						
1,2,3-TRICHLOROPROPANE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,2,4-TRICHLOROBENZENE	<0.001						
1,2,4-TRIMETHYLBENZENE	<0.001						
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
1,3,5-TRIMETHYLBENZENE	<0.001						
1,3-DICHLOROBENZENE	<0.001						
1,3-DICHLOROPROPANE	<0.001						
TRANS-1,4-DICHLORO-2-BUTENE		<0.0005	<0.002	<0.002	<0.002	<0.002	<0.002
				UJ2			
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.001
DICHLOROMONOFUOROMETHANE	<0.001						
HEXACHLOROBUTADIENE	<0.001						
ISOPROPYLBENZENE (CUMENE)	<0.001						
N-BUTYLBENZENE	<0.001						
N-PROPYLBENZENE	<0.001						
NAPHTHALENE (SEMI-VOL)	<0.001						
P-ISOPROPYLTOLUENE	<0.001						
SEC-BUTYLBENZENE	<0.001						
TERT-BUTYLBENZENE	<0.001						

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

Sample Type: Surface Water

SITE CODE	POND	POND	POND	POND	POND	POND
SAMPLE DATE	10/19/2001	05/31/2002	07/25/2002	08/23/2002	09/30/2002	05/30/2003
SAMPLE TIME	09:10	10:30	06:30	06:20	14:50	09:50
LAB	EL	EL	EL	EL	EL	EL
LAB NUMBER	0020191443	2050131002	2070137002	H020801291	2100008002	H030501501
SAMPLE NUMBER	CHHL-0110-101	CHHL-0205-201	CHHL-0207-101	CHHL-0208-100	HL-0209-201	CHHL-0305-100

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-TRICHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-TRICHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMOMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROPROPANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOCHLOROMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMODICHLOROMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOFORM	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROBENZENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLORODIBROMOMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROFORM	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	0.007
CHLOROMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001
CIS-1,2-DICHLOROETHENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DIBROMOMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.001
ETHYLBENZENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001
M-P XYLENE	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
O-XYLENE	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.0005	<0.0005
METHYL ETHYL KETONE	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
STYRENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TETRACHLOROETHENE	<0.001	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TOLUENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROETHENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROFUOROMETHANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.001	<0.0005

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROPROPANE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005
1,4-DICHLOROBENZENE	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

Sample Type: Surface Water

SITE CODE	POND	POND	POND	POND	POND	POND	POND
SAMPLE DATE	07/31/2003	08/15/2003	09/17/2003	05/28/2004	06/22/2004	07/30/2004	08/31/2004
SAMPLE TIME	15:30	12:15	13:20	07:55	11:45	15:50	15:35
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	3080003001	3080096001	3090099002	4050210001	4060180001	4080009001	4080223001
SAMPLE NUMBER	CHHL-0307-100	CHHL-0308-101	CHHL-0309-101	CHHL-0405-100	CHHL-0406-105	CHHL-0407-102	CHHL-0408-107

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMOETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOCHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMODICHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLORODIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROFORM	0.009	0.0031	<0.0005	<0.0005	<0.0005	0.0023	<0.0005
CHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CIS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001
ETHYLENIBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL XYLENE					<0.0005	<0.0005	
M-P XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
O-XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
METHYL ETHYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
STYRENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TETRACHLOROETHENE	0.00059	0.00067	0.00054	<0.0005	<0.0005	<0.0005	<0.0005
TOLUENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROFLUOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)

TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested

Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance; R:Rejected.

Sample Type: Surface Water

SITE CODE	POND	POND	POND	POND	POND	POND	POND
SAMPLE DATE	09/30/2004	06/30/2005	07/29/2005	08/31/2005	09/20/2005	05/23/2006	06/22/2006
SAMPLE TIME	16:30	14:10	12:40	14:30	16:00	10:00	11:45
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	4100007001	5060283001	5070219001	5090004001	5090196001	6050252001	6060234001
SAMPLE NUMBER	CHHL-0409-101	CHHL-0506-100	CHHL-0507-100	CHHL-0508-100	CHHL-0509-100	CHHL-0605-100	CHHL-0606-100

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMOETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOCHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMODICHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLORO BENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLORODIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROFORM	<0.0005	<0.0005	0.00054	0.0037	<0.0005	<0.0005	<0.0005
CHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001
CIS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001
ETHYLBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL XYLENE		<0.001			<0.0005		
M-P XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
O-XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
METHYL ETHYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
STYRENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TETRACHLOROETHENE	0.00058	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TOLUENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROFUOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1, UJ2: Standard; J3:Hold Time; J4, UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

Sample Type: Surface Water

SITE CODE	POND	POND	POND	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS
SAMPLE DATE	07/27/2006	08/28/2006	09/29/2006	08/08/2000	08/29/2000	09/21/2000	10/23/2000
SAMPLE TIME	12:15	13:15	10:00	06:45	08:45	19:47	12:20
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	607029901	6080276001	6100009001	002005670	0020090637	0030090756	0020090887
SAMPLE NUMBER	CHHL-0607-100	CHHL-0608-100	CHHL-0609-100	HL-0008-101	HL-0008-103	HL-0009-102	HL-0010-101
-- VOLATILE ORGANICS --							
1,1,1,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,1,2-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,1-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,2-DIBROMOETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,2-DICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
2-BUTANONE (METHYL-ETHYL-KETONE)				<0.002	<0.0005		
2-HEXANONE	<0.02	<0.02	<0.02	<0.002	<0.0005	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.002	<0.0005	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.001	<0.0005	<0.02	<0.02
BENZENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
BROMOCHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
BROMODICHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
BROMOFORM	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
BROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
CHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
CHLORODIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005		
CHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
CHLOROFORM	0.0041	0.0015	<0.0005	<0.001	<0.0005	<0.001	<0.0005
CHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005
CIS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
DIBROMOCHLOROMETHANE						<0.001	<0.0005
DIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005
ETHYLBENZENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
M-P XYLENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
O-XYLENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
METHYL ETHYL KETONE	<0.02	<0.02	<0.02			<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.002	<0.0005	<0.02	<0.02
METHYLENE CHLORIDE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
STYRENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TETRACHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TOLUENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TRICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TRICHLOROFUOROMETHANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
VINYL CHLORIDE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
-- SEMI-VOLATILE EXTRACTABLES --							
1,2,3-TRICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.002	<0.002
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.001	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
R:Rejected.

Sample Type: Surface Water

SITE CODE	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS
SAMPLE DATE	05/23/2001	07/02/2001	08/03/2001	05/31/2002	07/25/2002	08/23/2002	09/30/2002
SAMPLE TIME	08:40	10:00	08:15	07:30	06:15	06:45	14:40
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	0020190532	0020190781	0020190970	2050131001	2070137001	H020801292	2100008001
SAMPLE NUMBER	HL-0105-101	HL-0107-101	HL-0108-101	CHHL-0205-200	CHHL-0207-100	CHHL-0208-101	HL-0209-200

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,1,1-TRICHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,1,2-TRICHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,2-DIBROMOETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,2-DICHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,2-DICHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
BROMOCHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
BROMODICHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
BROMOPORM	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
BROMOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CHLOROBENZENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CHLORODIBROMOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CHLOROETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CHLOROPORM	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CIS-1,2-DICHLOROETHENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
DIBROMOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
ETHYLBENZENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
M-P XYLENE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
O-XYLENE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
METHYL ETHYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
STYRENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TETRACHLOROETHENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TOLUENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TRICHLOROETHENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TRICHLOROFLUOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001
1,4-DICHLOROBENZENE	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
TOT: Total; DIS: Dissolved; TRC: Total Recoverable; E: Estimated; <: Less Than Detect. Blank: parameter not tested
Validation Flags: A: Anomalous; UJ1: Blank; J2, UJ2: Standard; J3: Hold Time; J4, UJ4: Duplicate, Spike, or Split Exceedance;
R: Rejected.

Sample Type: Surface Water

SITE CODE	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS
SAMPLE DATE	05/30/2003	06/30/2003	07/31/2003	08/15/2003	09/17/2003	05/28/2004	06/22/2004
SAMPLE TIME	10:20	14:15	15:40	12:30	13:10	08:10	11:55
LAB	EL	EL	EL	EL	EL	EL	EL
LAB NUMBER	HO30501502	3070004001	3080003002	3080096002	3090099001	4050210002	4060180002
SAMPLE NUMBER	CHHL-0305-101	CHHL-0306-100	CHHL-0307-101	CHHL-0308-102	CHHL-0309-100	CHHL-0405-101	CHHL-0406-107

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMOETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOCHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMODICHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLORODIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROFORM	0.0005	0.00064	0.00058	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CIS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ETHYLBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL XYLENE							<0.0005
M-P XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
O-XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
METHYL ETHYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
STYRENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TETRACHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TOLUENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROFLUOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

Sample Type: Surface Water

	SITE CODE	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS
SAMPLE DATE	07/30/2004	08/31/2004	09/30/2004	06/30/2005	07/28/2005	08/31/2005	09/20/2005	
SAMPLE TIME	16:00	15:45	16:37	14:20	12:50	14:40	16:10	
LAB	EL	EL	EL	EL	EL	EL	EL	
LAB NUMBER	4080009002	4080223002	4100007002	5060283002	5070219002	5090004002	5090196002	
SAMPLE NUMBER	CHHL-0407-103	CHHL-0408-109	CHHL-0409-102	CHHL-0506-101	CHHL-0507-101	CHHL-0508-101	CHHL-0509-101	

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,1,2,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,1,2-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,1-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,2-DIBROMOETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,2-DICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
BROMOCHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
BROMODICHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
BROMOFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
BROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CHLORODIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CHLOROFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CHLOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
CIS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
CIS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
DIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
DICHLORODIFLUOROMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
ETHYLBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
TOTAL XYLENE	<0.0005			<0.001				
M-P XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
O-XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
METHYL ETHYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
STYRENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TETRACHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TOLUENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TRANS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TRANS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TRICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TRICHLOROFLUOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

-- SEMI-VOLATILE EXTRACTABLES --

1,2,3-TRICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
TRANS-1,4-DICHLORO-2-BUTENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

Sample Type: Surface Water

	SITE CODE	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS	SPRINKLER SYS
SAMPLE DATE	05/23/2006	06/22/2006	07/27/2006	08/28/2006	09/29/2006	
SAMPLE TIME	10:15	11:50	12:20	13:30	10:15	
LAB	EL	EL	EL	EL	EL	
LAB NUMBER	6050252002	6060234002	6070299002	6080276002	6100009002	
SAMPLE NUMBER	CHHL-0605-101	CHHL-0606-101	CHHL-0607-101	CHHL-0608-101	CHHL-0609-101	

-- VOLATILE ORGANICS --

1,1,1,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,1-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2,2-TETRACHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1,2-TRICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,1-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMOETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2-HEXANONE	<0.02	<0.02	<0.02	<0.02	<0.02
ACETONE	<0.02	<0.02	<0.02	<0.02	<0.02
ACRYLONITRILE	<0.02	<0.02	<0.02	<0.02	<0.02
BENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOCHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMODICHLOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
BROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CARBON DISULFIDE	<0.001	<0.001	<0.001	<0.001	<0.001
CARBON TETRACHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLORODIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROFORM	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CHLOROMETHANE	<0.0005	<0.001	<0.001	<0.001	<0.001
CIS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
CIS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DIBROMOMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
DICHLORODIFLUOROMETHANE	<0.0005	<0.001	<0.001	<0.001	<0.001
ETHYLBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
IODOMETHANE	<0.001	<0.001	<0.001	<0.001	<0.001
M-P XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
O-XYLENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
METHYL ETHYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02
METHYL ISOBUTYL KETONE	<0.02	<0.02	<0.02	<0.02	<0.02
METHYLENE CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
STYRENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TETRACHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TOLUENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,2-DICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,3-DICHLOROPROPENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROETHENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRICHLOROFLUOROMETHANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
VINYL ACETATE	<0.001	<0.001	<0.001	<0.001	<0.001
VINYL CHLORIDE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

-- SEMI-VOLATILE EXTRACTABLES --

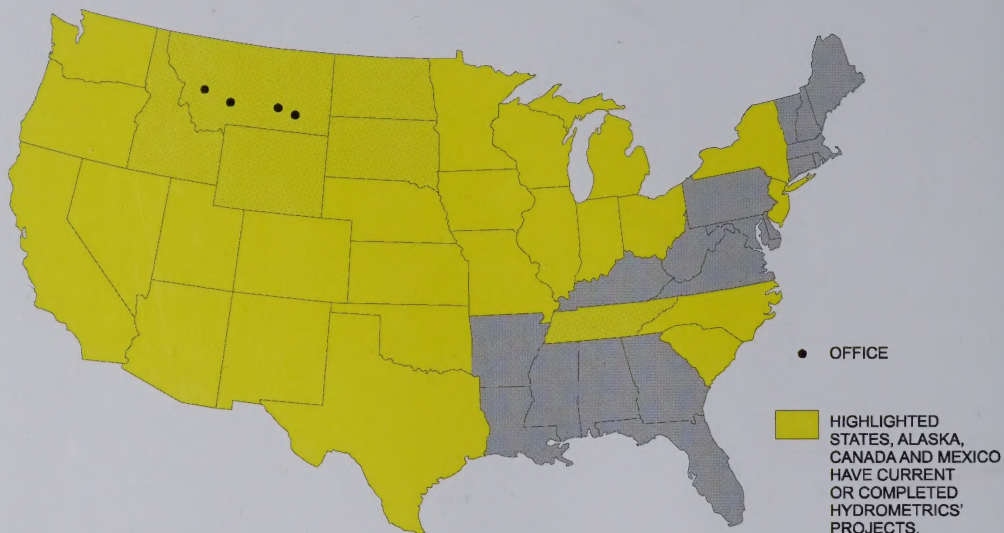
1,2,3-TRICHLOROPROPANE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
1,2-DIBROMO-3-CHLOROPROPANE	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
TRANS-1,4-DICHLORO-2-BUTENE	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
1,4-DICHLOROBENZENE	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

NOTES: All results in mg/L (Water) or mg/kg (Soil) unless noted and are laboratory (LAB) unless field (FLD) or calculated (CALC)
 TOT:Total; DIS:Dissolved; TRC:Total Recoverable; E:Estimated; <:Less Than Detect. Blank: parameter not tested
 Validation Flags: A:Anomalous; UJ1:Blank; J2,UJ2: Standard; J3:Hold Time; J4,UJ4:Duplicate, Spike, or Split Exceedance;
 R:Rejected.

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SAMPLE NUMBER ORDER					LAB NUMBER ORDER				
Page	Sample Number	Lab ##	Date	Site Code	Page	Lab ##	Sample Number	Date	Site Code
3	CHHL-0110-101	0020191443	10/19/2001	POND	1	0010090637	HL-0008-102	08/29/2000	POND
7	CHHL-0205-200	2050131001	05/31/2002	SPRINKLER SYSTEM	1	0010090887	HL-0010-100	10/23/2000	POND
3	CHHL-0205-201	2050131002	05/31/2002	POND	1	0010190532	HL-0105-100	05/23/2001	POND
7	CHHL-0207-100	2070137001	07/25/2002	SPRINKLER SYSTEM	1	0010190781	HL-0107-100	07/02/2001	POND
3	CHHL-0207-101	2070137002	07/25/2002	POND	1	0010190970	HL-0108-100	08/03/2001	POND
3	CHHL-0208-100	H020801291	08/23/2002	POND	6	002005670	HL-0008-101	08/08/2000	SPRINKLER
7	CHHL-0208-101	H020801292	08/23/2002	SPRINKLER SYSTEM	6	0020090637	HL-0008-103	08/29/2000	SPRINKLER
3	CHHL-0305-100	H030501501	05/30/2003	POND	1	0020090756	HL-0009-101	09/21/2000	POND
8	CHHL-0305-101	H030501502	05/30/2003	SPRINKLER SYSTEM	6	0020090887	HL-0010-101	10/23/2000	SPRINKLER
8	CHHL-0306-100	3070004001	06/30/2003	SPRINKLER SYSTEM	7	0020190532	HL-0105-101	05/23/2001	SPRINKLER
3	CHHL-0306-101	3070004002	06/30/2003	POND	7	0020190781	HL-0107-101	07/02/2001	SPRINKLER
4	CHHL-0307-100	3080003001	07/31/2003	POND	7	0020190970	HL-0108-101	08/03/2001	SPRINKLER
8	CHHL-0307-101	3080003002	07/31/2003	SPRINKLER SYSTEM	3	0020191443	CHHL-0110-101	10/19/2001	POND
4	CHHL-0308-101	3080096001	08/15/2003	POND	6	0030090756	HL-0009-102	09/21/2000	SPRINKLER
8	CHHL-0308-102	3080096002	08/15/2003	SPRINKLER SYSTEM	7	2050131001	CHHL-0205-200	05/31/2002	SPRINKLER
8	CHHL-0309-100	3090099001	09/17/2003	SPRINKLER SYSTEM	3	2050131002	CHHL-0205-201	05/31/2002	POND
4	CHHL-0309-101	3090099002	09/17/2003	POND	7	2070137001	CHHL-0207-100	07/25/2002	SPRINKLER
4	CHHL-0405-100	4050210001	05/28/2004	POND	3	2070137002	CHHL-0207-101	07/25/2002	POND
8	CHHL-0405-101	4050210002	05/28/2004	SPRINKLER SYSTEM	7	2100008001	HL-0209-200	09/30/2001	SPRINKLER
4	CHHL-0406-105	4060180001	06/22/2004	POND	3	2100008002	HL-0209-201	09/30/2002	POND
8	CHHL-0406-107	4060180002	06/22/2004	SPRINKLER SYSTEM	8	3070004001	CHHL-0306-100	06/30/2003	SPRINKLER
4	CHHL-0407-102	4080009001	07/30/2004	POND	3	3070004002	CHHL-0306-101	06/30/2003	POND
9	CHHL-0407-103	4080009002	07/30/2004	SPRINKLER SYSTEM	4	3080003001	CHHL-0307-100	07/31/2003	POND
4	CHHL-0408-107	4080223001	08/31/2004	POND	8	3080003002	CHHL-0307-101	07/31/2003	SPRINKLER
9	CHHL-0408-109	4080223002	08/31/2004	SPRINKLER SYSTEM	4	3080096001	CHHL-0308-101	08/15/2003	POND
5	CHHL-0409-101	4100007001	09/30/2004	POND	8	3080096002	CHHL-0308-102	08/15/2003	SPRINKLER
9	CHHL-0409-102	4100007002	09/30/2004	SPRINKLER SYSTEM	8	3090009901	CHHL-0309-100	09/17/2003	SPRINKLER
5	CHHL-0506-100	5060283001	06/30/2005	POND	4	3090009902	CHHL-0309-101	09/17/2003	POND
9	CHHL-0506-101	5060283002	06/30/2005	SPRINKLER SYSTEM	4	4050210001	CHHL-0405-100	05/28/2004	POND
5	CHHL-0507-100	5070219001	07/29/2005	POND	8	4050210002	CHHL-0405-101	05/28/2004	SPRINKLER
9	CHHL-0507-101	5070219002	07/28/2005	SPRINKLER SYSTEM	4	4060180001	CHHL-0406-105	06/22/2004	POND
5	CHHL-0508-100	5090004001	08/31/2005	POND	8	4060180002	CHHL-0406-107	06/22/2004	SPRINKLER
9	CHHL-0508-101	5090004002	08/31/2005	SPRINKLER SYSTEM	4	4080009001	CHHL-0407-102	07/30/2004	POND
5	CHHL-0509-100	5090196001	09/20/2005	POND	9	4080009002	CHHL-0407-103	07/30/2004	SPRINKLER
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5	CHHL-0605-100	6050252001	05/23/2006	POND	9	4080223002	CHHL-0408-109	08/31/2004	SPRINKLER
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5	CHHL-0606-100	6060234001	06/22/2006	POND	9	4100007002	CHHL-0409-102	09/30/2004	SPRINKLER
10	CHHL-0606-101	6060234002	06/22/2006	SPRINKLER SYSTEM	5	5060283001	CHHL-0506-100	06/30/2005	POND
6	CHHL-0607-100	6070299001	07/27/2006	POND	5	5060283002	CHHL-0506-101	06/30/2005	SPRINKLER
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3	HL-0209-201	2100008002	09/30/2002POND	3	H030501501	CHHL-0305-100	05/30/2003POND
1	HL-9005-111	90-10828	05/06/1990POND	8	H030501502	CHHL-0305-101	05/30/2003SPRINKLER



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